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Editor's letter

It only seems a few months ago that we were last in Harrogate, reading avidly about the Risc PC and all its powerful new features. It's now time for the 1995 Acorn User Spring Show, and the market has come a long way since then, with professional DTP packages, sophisticated photo retouching software and the ever-increasing number of CD-ROMs on the market.

The Harrogate show will prove an interesting showcase of everything that's good about the Acorn market, and our 16-page guide starts on page 35, including a stand-by-stand round up of all the exciting new products you'll be able to see and buy. Don't miss out, whatever you do!

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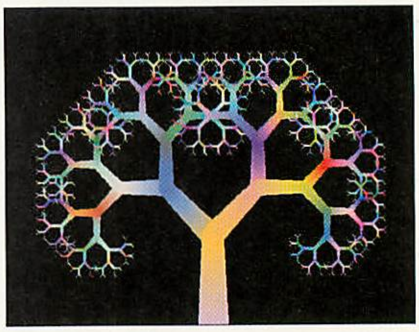
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Published by IDG Media Ltd, Media House, Adlington Park, Macclesfield SK10 4NP
e-mail mark@acornusr.demon.co.uk
Tel: (01625) 878888 Fax: (01625) 850652
Printed by Duncan Web Offset, Maidstone

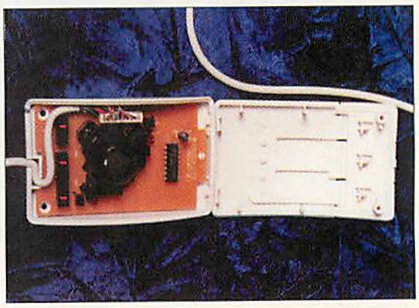
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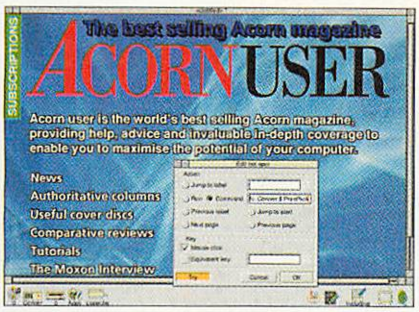


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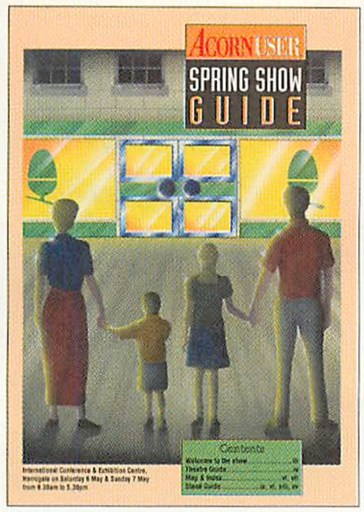
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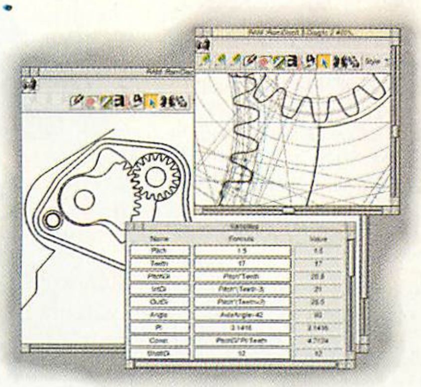


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News

Big month for Online Media

ONLINE Media is the first Acorn division to show a product based around the latest ARM7500 computer-on-a-chip, namely the Set Top Box 2 (STB2). A development on from the ARM250, the ARM7500 is a single chip containing elements of the Risc PC's VIDC20 sound and video controller, an ARM7 RISC processor core plus the latest ARM memory management and I/O controller technology. At the same time Online Media has celebrated the official switch-on of its ICL video server box at its Newmarket Road base in Cambridge and the Digital Interactive TV (DiTV) Service Nursery was also launched.

STB2 is an enhanced production version of the original Online Media prototype, which was based closely on Risc PC parts. The new STB has a lower profile and a stylish designer look and inside there is an integrated MPEG decoder for playing digital video. Compared to the original model, STB2 is more compact and much cheaper to manufacture in quantity. Online will be providing MPEG1 and MPEG2 versions in both European PAL and US NTSC television standards. A futuristic looking infra-red controller has been produced for the STB2 as well.

A special version of the STB2 without MPEG facilities but including a modem will be produced for the ViewCall project announced last month. OM's chief executive, Malcolm Bird, told *Acorn User* that Online Media now leads the digital STB field with the Mk2 product and he expects to announce some exciting deals with service providers looking to set up large scale DiTV trials, both in the UK and abroad.

To underline how important Online Media is to the emerging DiTV industry, ICL's managing director and chief executive, Peter Bonfield, made a special trip at the end of March to Online in order to ceremonially switch on OM's large ICL digital video server, which serves the Cambridge Trial. The server is a large freezer-sized cabinet which has a maximum capacity of several hundred gigabytes of fast hard disc storage, which will contain movies and other recorded TV programmes for viewing on demand. The ICL server is linked into the Cambridge Trial ATM network via a 155 megabits/second connection and supplements earlier smaller capacity video servers in the form of Olivetti Research Disc Bricks.

250 homes in and around Cambridge using OM STBs will have access to Nat West cable TV banking services, the first such trial service in the UK. Eventually 1000 homes in the area will be offered such a service using Acorn-derived Online Media STBs. The service will allow people to check their bank account balances, examine the last five recorded transactions, pay bills, transfer money and order cheque books, statements, and so on. There will also be an electronic mortgage service and an electronic shopping mall.



Online Media's new set top box, the STB2.



Online Media's presence on the Acorn stand at the German CeBIT show.

Now that OM and the Cambridge Trial is gaining momentum, other companies are beginning to require support to develop the new services they plan to offer on DiTV networks like that of the Cambridge Trial. Co-operation and the exchange of expertise and experience is the key behind the formation of a unique 'service nursery' which will initially be managed by OM. Through the service nursery, partner service provider companies will be able to buy consultancy and development facilities from Online Media as part of Phase Two of the Cambridge Trial.

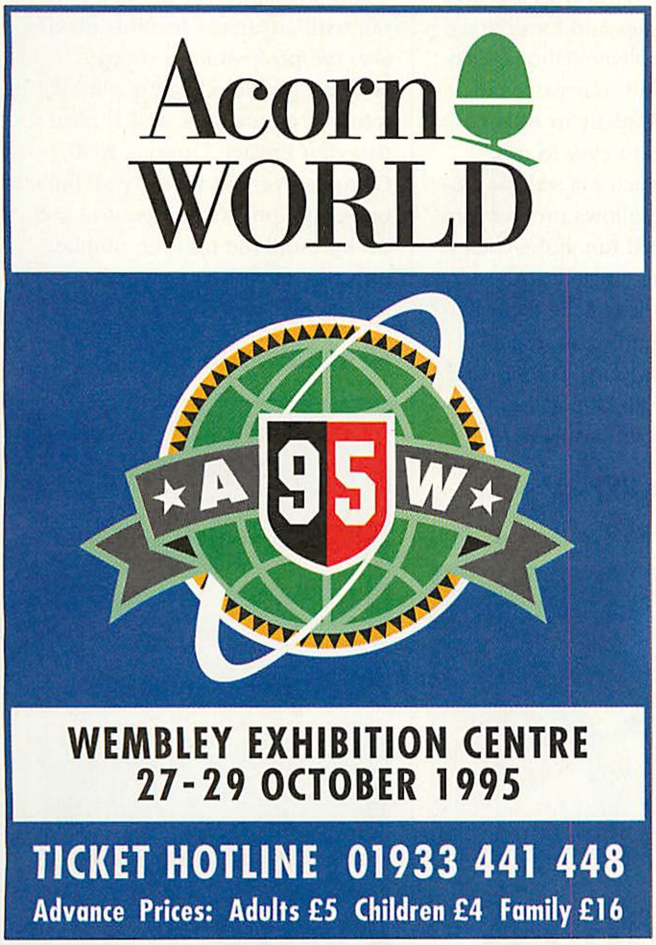
The boffins from the Tesco supermarket chain, who are exploring the possibility of using DiTV as a vehicle to serve its customers, will be among the first users of the service nursery facility. Other firms linked with the project are the market research company NOP, the advertising agency BMP DDB Needham, Anglia TV and Nat West. Geoff Vincent, OM services manager explained: 'We are now breaking the *Catch 22* in DiTV. We have already put in place the agreements to install the technology. Now we are helping to create the services which will be provided by this equipment. These, in turn, are expected to create demand for more equipment thereby encouraging the creation of more services.'

Although analogue cable TV is a relatively mature industry, especially in North America and parts of continental Europe, established analogue STB manufacturers are way behind in the race to develop STBs for DiTV cable networks. Computer companies like Apple have adapted their personal computer architectures to form STB solutions, but Online Media reckons it has the leading solution.

• Oracle, the database company which is pioneering the standards behind the storage and presentation of next-generation multimedia services, is to work with OM to port its *Oracle New Media* software to the OM STB platform. OM is the first European STB manufacturer to port Oracle software.

• Macromedia, one of the leading producers of multimedia authoring tools and Acorn's Online Media division has announced it is to join forces to develop multimedia tools for Online Media's STB.

Acorn World '95 is just round the corner



THIS year's Acorn World show, to be held at Wembley Exhibition Hall 1 between 27-29 October 1995 and traditionally the high point of the Acorn calendar, is only six months or so away. It's an opportunity to see what's new and to preview Acorn developments. This year the accent will be on processor technology, encompassing the latest fast ARMs, the new StrongARM technology in conjunction with Digital Equipment Corporation, and multi-processor environments which will be able to accelerate applications like 3D graphics rendering.

Another show highlight will be the first public viewing of new products Acorn is planning to launch in the final quarter of 1995 – whatever they might be! Naturally, competition for the limelight will also come from Acorn's busy band of third-party hardware and software developers.

Acorn World will also feature the Information Superhighway, with Acorn's Online Media division on hand to show intelligent ATM-based digital set top boxes demonstrating the brave new world of interactive multimedia and video on demand. Other services online to sample will include home banking, home shopping, news services, educational programs and networked interactive games. Online Media will also be showing Risc PC users how they can add many of the features of an Online Media set top box to their own computers.

Another feature of the show will be special seminars outlining the latest Acorn Computer developments for members of Clan Acorn, the official user group which was launched at last year's show, and which now has over 1500 members.

Last year over 12,500 people visited Acorn World, up on the previous year's attendance, and £500 was raised for Guy's and St Thomas' Hospital Trust as part of the show's Lucky Dip. Acorn assures us it is busy planning many more exciting initiatives for this year's show, and we'll be able to bring you further news of these in the issues of *Acorn User* leading up to the big event.

Ticket offer

For now, there is a special offer for the first 50 readers who contact the advanced ticket hotline number and order tickets, quoting 'Acorn User, May' – they will each get a free special liquid crystal mouse mat. The number to ring is (01933) 441448. There is also a saving of up to 20 percent on gate prices by booking early: advance tickets are £5 for adults, £4 for children and £16 for families.

P&O offer

Another stop-press offer supporting Acorn World '95 is special discount on P&O ferry fares for people booking advanced show tickets. P&O currently uses specially equipped Acorn computer rooms to keep kids entertained during crossings. We'll have more details next month.

Tape streamer from i-cubed

DataSafe is the new tape streamer backup solution from i-cubed. The drive connects via the parallel port of second generation Acorn computers (A3010, 3030, 4000, 5000, A4 and Risc PC) and uses low cost QIC80 format tape cartridges. DataSafe is aimed at small and medium sized Acorn networks with machines fitted with hard drives up to 120Mb.

i-cubed
Tel: (01223) 566112

Free Acorn Video for primary schools

Making IT Work - A Video Guide for Primary Schools is the title of a new video which is available free of charge to teachers and IT co-ordinators nationwide. The production is hosted by former *Tomorrow's World* presenter Judith Hann, and explores the experiences of a number of schools which have recently installed new Acorn computer systems.

To obtain a free copy of the video, either use a direct mail voucher or write to Online Services, Acorn Computers, 700 Great Cambridge Road, Enfield, Middlesex EN1 3EA, stating name, position and school address and phone number.

Sibelius 7 gets worldwide exposure

The Acorn-based *Sibelius 7* music processor continues to delight musicians, this time all over the world. At the Tenth London International Composers' Festival on Friday 17 March, a *Sibelius 7* system performed Ligeti compositions which had been labelled as too difficult for humans to play. A Risc PC running *Sibelius 7* software was linked via a MIDI interface to a special motorised piano, and the performance was apparently greeted by cheers from the packed concert hall.

Interviews with one of the brains behind *Sibelius 7*, Jonathan Finn, were broadcast on Channel 4 in the UK and America's ABC, NBC and Channel 1, Canada's CBT network and the cable and satellite Euronews service.

Sibelius Software
Tel: (01223) 302765

Risc PC 486 card shipping in quantity, at last

ACORN has informed *Acorn User* that supplies of the Risc PC 486 card were scheduled to start shipping at the beginning of April. Although 10,000 cards have been manufactured in the first batch, this may represent below 40 per cent of the installed Risc PC base.

Theoretically there could be shortages, though nobody really knows how many Risc PC users actually want to buy a 486 upgrade. Anyone can buy a Risc PC 486 card for £99 + VAT until the end of June. Thereafter the post-purchase upgrade cost rises to £199 + VAT, but purchasers of new Risc PCs will be eligible for the 486 option at sale time for the original £99 + VAT cost.

IBM PC DOS 6.3 and the necessary RISC OS and PC support software are included in the price, but you will have to source your own flavour of Windows, if required. User-friendly desktop front-ends, like Microsoft Windows, start at around £50 + VAT, and Windows for Workgroups 3.11 is a good choice at £89 as it enables 32-bit file access, which can double hard disc performance. Risc PC 486 cards will be available from dealers by the time you read this, or write to Acorn Direct, 13 Denington Road, Wellingborough, Hants NN8 2RL.



The PC Card comes bundled with IBM's PC DOS, a result of the new relationship between Acorn and the American computer giant.

ACL will get slice of funds from rights issue

ONLINE Media, Acorn's new interactive multimedia division, is destined for big things – possibly dwarfing its personal computer-making parent one day – but it is not planned to make a profit in its first three years, says Sam Wauchope, managing director of Acorn Computer Group. The recent rights issue, which guarantees Acorn £17 million in new investment, was primarily devised to fund Online Media during its formative years, but around £4 million will be ploughed back into what remains the core business for the time being, computers and therefore Acorn Computers Limited (ACL).

It has been a shaky few months for Acorn after it revealed poor 1994 financial results and seemed to be neglecting ACL in favour of the exciting new potential of Online Media. However Wauchope has re-iterated the importance of ACL and *Acorn User* believes assurances about the future of ACL will be backed up by new Risc PC derivatives for the more cost conscious end of the market, along with important enhancements to RISC OS. Wauchope says that 1994 was a bad year which is not to be repeated. He expects ACL to be profitable in 1995, though probably with a reduced turnover because of the continuing tight squeeze on schools spending, where two thirds of Acorn computer sales lie.

Acorn Computers Ltd
Tel: (01223) 254254

VTi and Eclipse combination bears fruit

SISTER companies VTi and Eclipse have updated some of their products recently. On the Eclipse side, PowerPad game controllers are now Risc PC-compatible, while existing users can contact Eclipse to find out how to make their PowerPads Risc PC-compatible too – it's just a simple modification. PowerPads cost £24.99 inc VAT each or £34.99 inc VAT for a pair.

Meanwhile, Eclipse arcade game star *James Pond* features in a new educational package describing the new Thames Water London Ring Main (marketed on the SkillsWare label). Eclipse is canvassing opinion about whether there is a market for more educational software projects involving its arcade hero.

VTi, the more serious side of the company, has released £19 + VAT CD-ROM drivers for Sony CDU55-S and CDU-55E drives, Toshiba 3401, 5201 and 4101 models, NEC SCSI drives and Wearnes CDD-120 series IDE drives. VTi's *Sonor* sound sampler software has been enhanced to manage several samples in memory at once, export samples in a multitude of formats and digitally filter samples. *Sonor* is supplied free with the Printer Port Sampler (£44 + VAT) and the MIDI Sampler (£69 + VAT). Another bundled utility is *Talking Canvas* for creating multimedia applications.

VTi/Eclipse
Tel: (01234) 531194
Fax: (01234) 531196

ARM results

Advanced RISC Machines Group, of which Acorn has a 43 percent interest, reported pre-tax profits for 1994 of £3.1 million, up from £400,000 in 1993. Turnover was almost tripled from £2.6 million to £7.2 million. More spectacular growth is predicted for 1995.

Acorn training gets a brand new look

Insight **is the new moniker for the highlight of Acorn's training year, the annual conference, exhibition and seminar which used to be called Access IT.**

Insight 95 will be held at the Hinckley Island Hotel in Leicestershire, on Friday 14 July and Saturday 15 July. Training categories to be explored at the event include Strategy and Planning – preparing for implementing IT policy, Networking and Curriculum and Software. The fee for attending the conference, including meals and one night's accommodation at the hotel, is £499, but bookings made before 26 May are eligible for a half price special offer. The *Insight '95 Guide Book*, which has full details of the conference and seminar activities, plus booking forms, is available now from the Insight '95 Administrator, Acorn Computers Limited, Acorn House, Vision Park, Histon, Cambridge CB4 4AE or by telephoning Cambridge (01223) 254386.

Easier Textease gains spelling checker

Softease Limited has added a spelling checker with a difference to its *Textease* desktop publishing package aimed at schools.

Most spelling checkers include advanced features like check as you type, for example, but the nice thing about *Textease* is that it will highlight the words that it suspects to be spelt incorrectly in colour, making it easier to home in on words that really need correction, and missing out correctly spelt text like proper names and post codes. *Textease*, priced £29.50 without the spelling checker or £39.50 with it, is designed to be used by anyone from six years of age and upwards.

Softease
Tel: (01684) 73173

Acorn and Tesco repeat Computers for Schools

IT'S that time of year again, when local schools hatch their plans to collect as many Computers for Schools vouchers as possible from Tesco shoppers in order to earn free Acorn computers, software, accessories and other school resources.

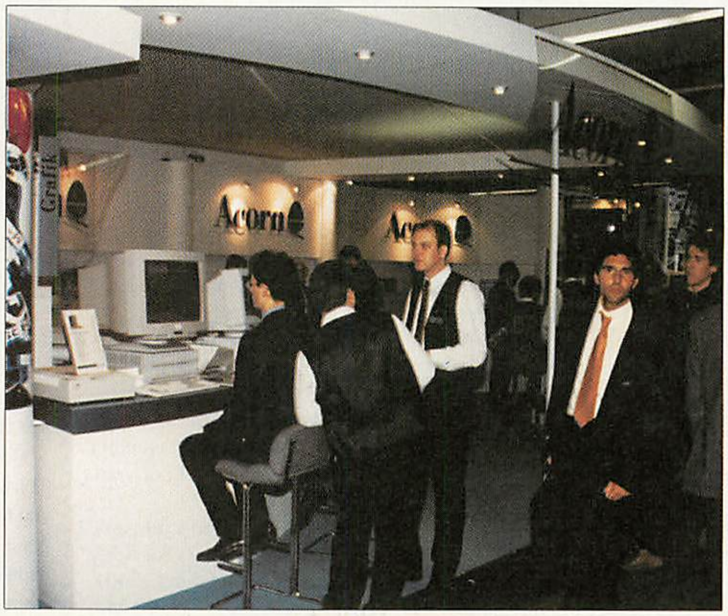
Like previous years, shoppers will earn one voucher per £25 worth of groceries purchased from their local Tesco supermarket. Vouchers will be available to shoppers between April 24th and July 2nd. These vouchers can be donated to local schools, who can then collect enough to redeem against goods listed in the 1995 Computers for Schools catalogue.

For example, an Acorn A3010 Early Years computer with 2Mb RAM but without a monitor costs just 1500 vouchers. An Acorn A3020 with 2Mb RAM and a multiscan monitor will cost 2000 vouchers, down 500 vouchers on last year. At the other end of the scale, a flagship Risc PC with a 17in monitor, 9Mb RAM and a 420Mb hard drive, will cost 7500 vouchers. Last year, over 10,000 schools redeemed vouchers, netting over 22,000 items of free computers and other equipment and accessories. Some items can be obtained for as little as a hundred vouchers this year, compared with 200 last year. For the first time, even if at the end of this year's scheme a school doesn't have enough vouchers to secure a particular item, the vouchers can be held over and be included in any claims made during the 1996 scheme.

Most schools in England and Wales should have received details of the 1995 scheme and a catalogue by now. Another 1995 first is the inclusion of Scotland in the scheme, now that Tesco has stores there. If you have any queries about Tesco's Computers for Schools '95, there is a general schools helpline on 0171-580 9370, or you can enquire by sending e-mail to: computers_for_schools@entity.email .com.

Risc PC a winner in Germany at Hannover's CeBIT show

CHIP magazine, one of the most prestigious German computer publications, has awarded the Acorn Risc PC a coveted 'Computer of the Year' award, beating Apple's Power Macintosh in the RISC computer category. Meanwhile, another German publication, *PC Praxis* (*PC Practice*) nominated the Risc PC 486 co-processor card for another award.



Acorn's busy stand at CeBIT attracted a lot of attention.

At the giant CeBIT computer and office equipment expo in Hannover, Germany, at the beginning of March, Acorn's exhibit drew large crowds. Featured on the stand was an Online Media interactive multimedia set top box (STB) plus a battery of Risc PCs demonstrating the latest applications and add-ons for Acorn computers. Attracting much attention was a NovaJET III Colourgen ink-jet poster printer producing large full colour posters, while Acorn stalwart Gordon Taylor was providing a sneak preview of a public domain port of Berkeley Unix running on the Risc PC.

Elsewhere at CeBIT, the Acorn family was much in evidence, with Online Media STBs on the main Olivetti stand as well as ICL's stand. ARM chips could be found on Apple's stand inside the Newton MessagePad PDA and the badged version of the Newton being demonstrated by German industrial giant, Siemens. IBM's Serial Storage Architecture (SSA) system, which is a much simplified and higher performance alternative to SCSI peripheral connectivity, now used ARM chip technology and this was also on display at CeBIT.

New Irlam products

Specialists in imaging and multimedia, Irlam Instruments will have a number of new products to show at the *Acorn User* Spring Show in Harrogate. There is a new 16-bit sound sampler, a teletext and NICAM TV tuner card, and the 24i16 multimedia system, combining 24-bit video with 16-bit audio. Irlam also hopes to show a high performance video capture, compression and playback system called VideoDesk, which makes use of the Risc PC's DMA.

Irlam Instruments
Tel/Fax: (01895) 811401

Button up

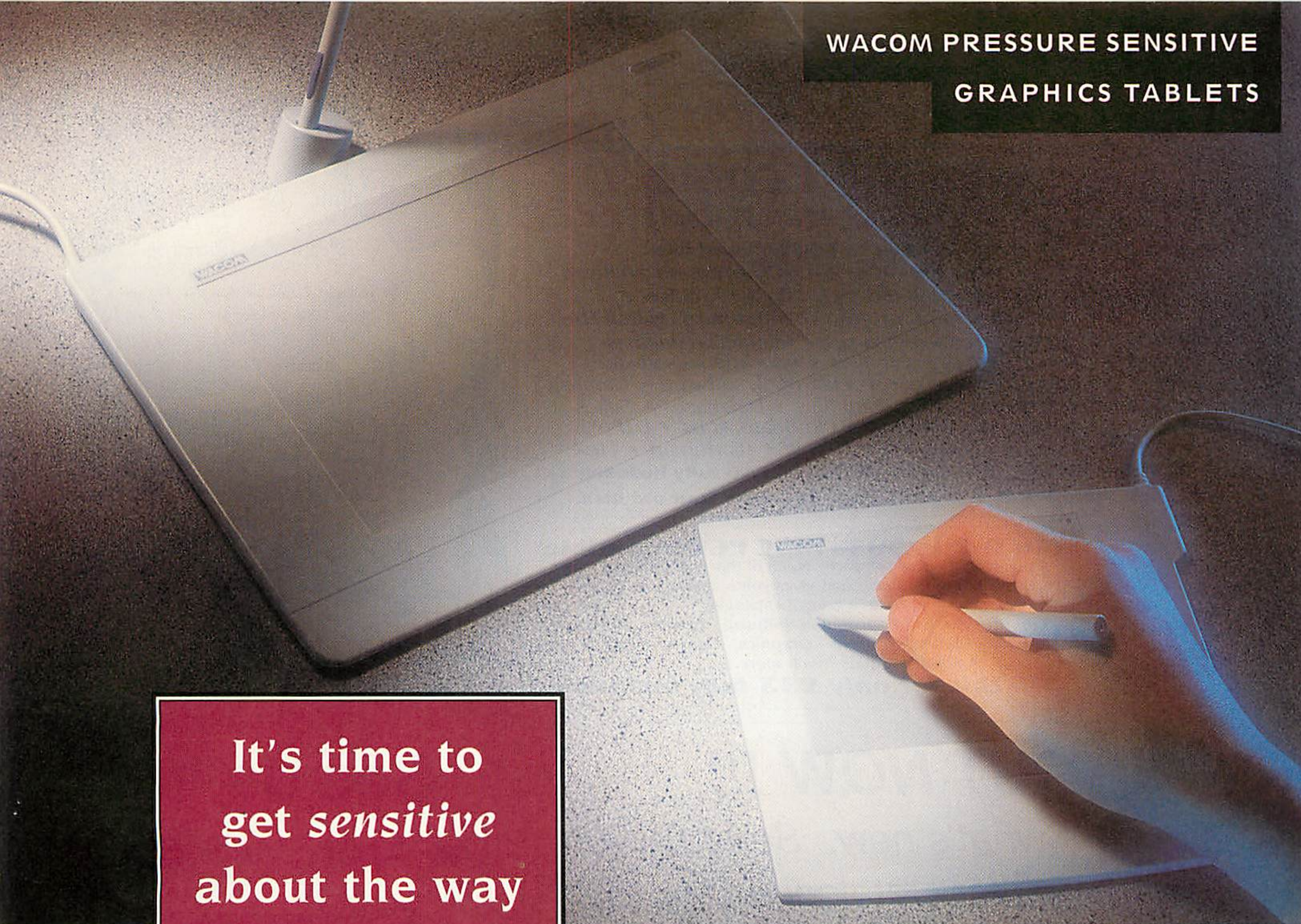
Lindis International has released a new software utility called *Buttons*, which it describes as a simple application launcher and hard disc protection system. Lindis is aiming the utility at teachers who need to manage computers and software in the classroom. On boot-up the user gets a single *Buttons* screen containing application icons which can be launched with just a single mouse click. Icons can have tasks associated with them, so an application could be launched at the same time as a printer driver, for example. The hard disc protection aspect enables file access restrictions using passwords to be set and specific work areas allocated. *Buttons* is priced £24.95 + VAT and a site licence is £75 + VAT.

Lindis International
Tel: (01986) 785476

Trak those videos

A couple of new titles are to be shown at the Spring *Acorn User* Show by The Really Good Software Company (TRGSC). *VideoTrak* is a database for video tape collectors. Programmes recorded on individual tapes can be located using key word searching and there is a cross-referencing facility to enable, for example, all the films of a specific actor or director to be listed if required. *VideoTrak* is priced £15. TRGSC will also show a new version of its *Notice Board* electronic display system, which now has a revised front end to make it easier to use. *Notice Board* is priced £35.

RGSC
Tel/Fax: (01582) 761395



WACOM PRESSURE SENSITIVE GRAPHICS TABLETS

It's time to get *sensitive* about the way you *create* your graphics

....

Many computer users feel that a graphics tablet is more natural to use than a mouse and without doubt it gives a much faster, smoother and higher resolution response. The mouse remains functional and can be used at the same time as the pen — however the pen has such a natural and precise feel, you will probably prefer it for many operations such as moving windows, drag and drop, region selection etc.

The new (approximately A6) ArtPad tablet offers a superb specification, even by Wacom standards; resolution exceeding 2000 dpi, 200 samples per second and 256 levels of pressure. All Wacom tablets include a cordless pen for added ease of use and flexibility.

The tablets are pressure sensitive, so in combination with suitable applications they can produce realistic effects such as variable width (the Eesox ArtWorks pressure sensitive tool) or variable density airbrush painting (PhotoDesk). The Computer Concept's drivers will be compatible with these and other software that can take advantage of the pressure information, such as Studio 24 and DA Picture.

Computer Concepts can supply the tablets with either Photodesk or the Eesox Pressure Tool at special prices. **PHOTODESK** is a photo retouching package from Spacetech, which offers a wide range of advanced image manipulation features; for example an airbrush, paintbrush and magic wand, full 24 bit colour support, the use of virtual memory, OLE with Impression, complete undo, effects such as colouring, toning and masking, motion blurring, cloning and smudge and smear.

The package contains the Wacom tablet (A6 ArtPad, A5 or A4) and manual, a cordless pen, Computer Concepts driver software suitable for all models of Acorn RISC computer (A3000 must have serial port upgrade) and PC drivers. Requires 1Mbyte or more.

Price: A6 ArtPad & drivers: £169 + VAT (£198.57 incl.) A5 tablet & drivers: £399 + VAT (£468.82 incl.)
A4 tablet & drivers: £549 + VAT (£645.07 incl.)

ArtWorks Pressure Tool with tablet: add £10 + VAT (£11.75 incl.)
PhotoDesk with tablet: add £125 + VAT (£146.87 incl.)

ArtWorks Pressure Tool: £39 + VAT (£45.82 incl.) PhotoDesk: £169 + VAT (£198.57 incl.)

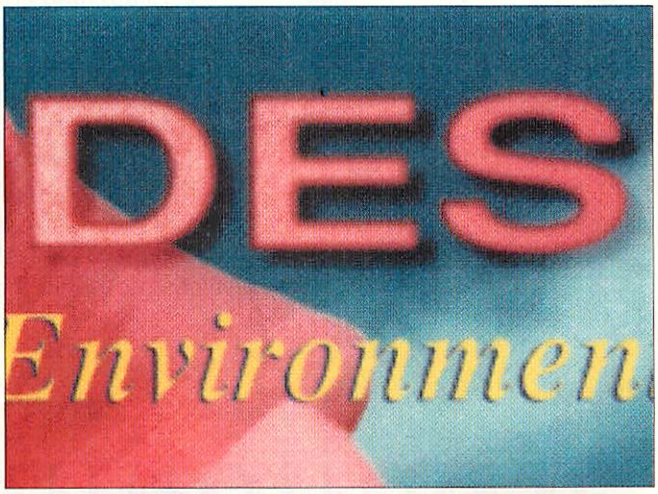
Computer Concepts Ltd

GADDESDEN PLACE • HEMEL HEMPSTEAD • HERTS • HP2 6EX • TEL. 01442 351000 • FAX 01442 231632 • Email: Info@CConcepts.co.uk

Graphics

Colour printing revolution from Spacetech

COLOUR printing technologies have, until now, been separated by a big dollar sign. The printers on the cheaper side of this divide are the fast and economical inkjets and the slower wax transfer devices. On the other side there are the bigger, higher resolution wax transfer, dye sublimation and more recently colour laser printers. Spacetech saw the gaping hole in the market and has launched a dye sublimation printer at the kind of price that people who bought BJC-600s and HP560Cs would most certainly have considered worth the extra dough.



An 800dpi dye sublimation print (scaled up linearly by four), interpolated from 200dpi using Spacetech's error diffusion for unusually sharp dye sub text and line art.

Priced at under £1000, the colour printing package, which includes the Fargo Primera printer itself with photo-realistic dye sublimation upgrade kit, special printer driver and *Photodesk*, breaks new ground in desktop colour printing. The Primera is a stripped down printer (RAM-less and CPU-less) directly driven by the Acorn which enables the price of the printer to enter into the price category of inkjets.

Quality of the output, however, would make anyone proud of their inkjet printouts wither in envy as the dye sublimation technology allows continuous tone colour to be produced, as opposed to requiring halftone screening of three or four basic colours to achieve the same effect.

Continuous tone printing effectively means that the printer has 16.7 million colours which it can print on any given area of paper, the size of the area dependant on the printer's resolution. To compare a halftone printer with continuous tone printer of 200dpi, you would need a halftone printer resolution of around 2500dpi. This is a far cry from the 300 and 360dpi resolutions of most colour inkjets.

For photographic imagery, having continuous tone output is superb. Output from any RISC OS application using the *Photodesk* driver is truly photographic in appearance, but for line art and text the low resolution of the dye sub usually makes for bitty, jagged printouts. Spacetech's unique printer driver has masterfully solved this problem by increasing the output resolution of the printer, and at the small cost of losing absolute true tone printing, the dye sub antialiases its output at a resolution of 800dpi. Text, graphics and bitmaps all emerge sharp as well as photographic in quality, with only minute traces of dithered dots evident.

Unfortunately, unless you've got something useful to do, like wash your car or go shopping, the quarter of an hour wait for each A4 page will be a tortuous ordeal. Bigger dye subs in the order of £3000 are only twice as fast, but you have to spend about £7000 for a two-minutes-per-page job. Quite a premium, methinks. Also, because of the fact that each page costs a remarkable £2.50 per page in materials, it looks like the inkjet is going to be safe for a while yet.

For the smaller design houses and opulent art departments, perhaps even for home users who would like extremely impressive one-off colour prints, the Fargo Primera is an amazing printer. Buy one before the price goes up!

Spacetech
Tel: (01305) 822753

Pic of the month

DUE to an overwhelming amount of graphics news there is no prize this month, but don't despair, your entries are still with us and you might end up becoming a featured Acorn artist like so many Pic of the Month winners in the past.

The response to this feature has been highly encouraging, with some entries of a very high standard from people using nothing more than *Paint* and *Draw*, the software which comes free with the machine. Enter now, and you could win £20, and have your picture featured on this page.

Compositon time

Live Picture and *xRes* are two packages on the Mac which treat bitmaps as objects, just as individual elements of a vector graphic are in *Draw, Vector* or *ArtWorks. Composition* is the first Acorn program based on the same concept, enabling multiple bitmaps and graphics to be discretely manipulated in terms of colour, opacity, orientation, shape and by countless other functions. Early beta versions of the program, which have been on test since as far back as a year ago, have proven the potential power of the system, but whether the package will have the same ease of use as a vector package like *ArtWorks* will have to be judged when the program is released at Harrogate.

Clares Micro Supplies
Tel: (01606) 48511

C++ Compiler

The Acorn C C++ compiler is finished, boxed and ready to go. For the programming illiterate among us, C++ is a mid-level object oriented programming language which doesn't mean much to you or me, but to the programming world C++ is the preferred programming language for the creation of practically all types of home, business and graphics applications. Unfortunately, Acorn's solution using *CFront* rather than a direct compiler is less popular.

The Computer Concepts team used C++ to code the bulk of its PC product, *Xara Studio* (aka Camelot) and the Acorn C++ compiler means that the Acorn, with its multiprocessor technology, could become much more attractive to PC software houses in converting existing packages for the higher-end user.

Acorn Computers Limited
Tel: (01223) 254254

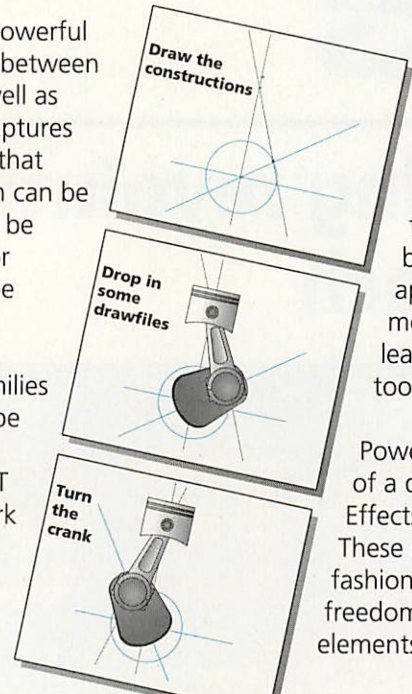
Contacting me

You can contact the Graphics page by writing to me, Jack Kreindler, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to: jack@acornusr.demon.co.uk.

Parametrics

Parametric CAD systems can be used as powerful modelling tools. Think of them as a cross between a spreadsheet and a drawing board. As well as creating drawings, Apollonius PDT also captures thė inherent design rules and constraints that control the drawing. Key parts of a design can be changed, and the rest of the drawing will be recalculated automatically. This means, for example, that all fillets in a drawing can be altered in a single operation.

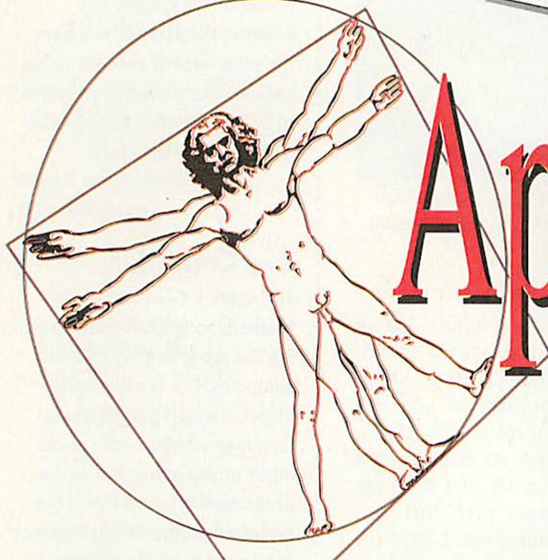
'What if' questions can be asked, and families of geometrically similar components can be generated from one source drawing. Perhaps most impressively, Apollonius PDT actually allows mechanical systems to work on screen. By dragging a component in a linkage, the rest of the linkage will move to the correct positions.



Revolutionary User Interface

Instead of the bewildering array of drawing tools offered by other CAD systems, Apollonius PDT can generate a comprehensive range of geometric constructions with just one line and one circle tool. The program monitors the context of mouse movements and button clicks and creates the most appropriate constructions. This means that the software is easy to learn, and also fast to use since frequent tool changes are not required.

Powerful yet simple control over the appearance of a drawing is given using a system of Styles and Effects (similar to those found in DTP applications). These duplicate the functionality of layers in old fashioned CAD systems, but give much greater freedom of control over the various attributes of elements within the drawing.

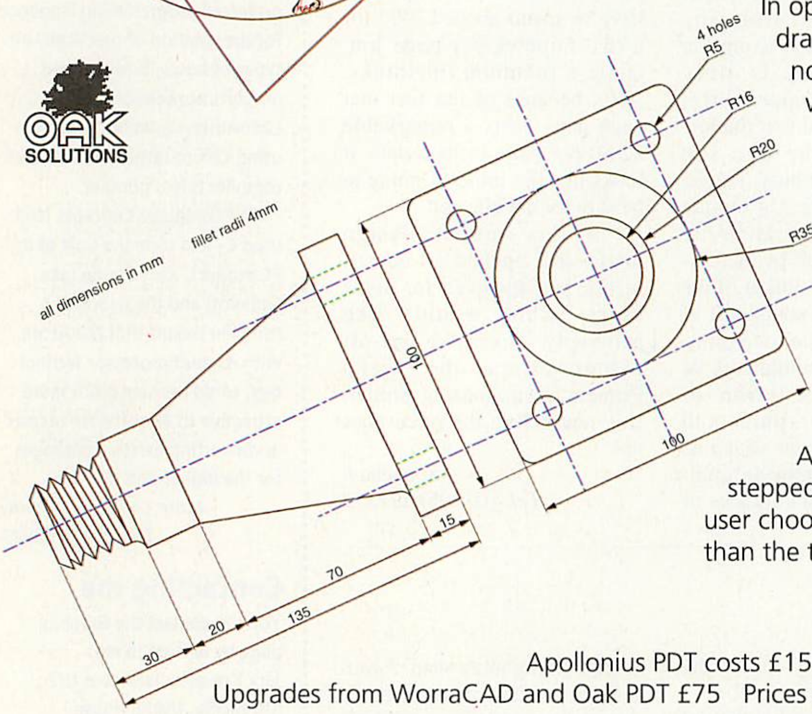


Apollonius PDT

The CAD system that rewrites the rule book

OAK SOLUTIONS

Drawing



In operation, Apollonius PDT works like a smart drawing board. Constructions such as tangents, normals, parallels and perpendiculars are created with consummate ease.

A single 'Ink' tool draws lines, arcs and circles to outline your contructions. Finally, a solitary dimension tool adds linear, circular and angular dimensions to the drawing. These are updated automatically if any sizes in the drawing change.

A virtual grid system allows distances to be stepped off from any origin point and at any angle the user chooses - this is much more versatile and intuitive than the traditional 'graph paper' style approach.

Apollonius PDT costs £150
Upgrades from WorraCAD and Oak PDT £75 Prices include P&P but exclude VAT

Oak Solutions Ltd Dial House Chapel Street Halton Leeds LS15 7RN
Tel: 0113 232 6992 Fax: 0113 232 6993 email: us@oakltd.demon.co.uk

Spreading the World Wide Word

IT'S nice to be able to report an application where Acorn computers are being used not only as communications technology tools, but also to enable communication between people of different beliefs, and to attempt to bridge the wide gulf between Roman Catholics and Evangelical Protestants in Ireland.

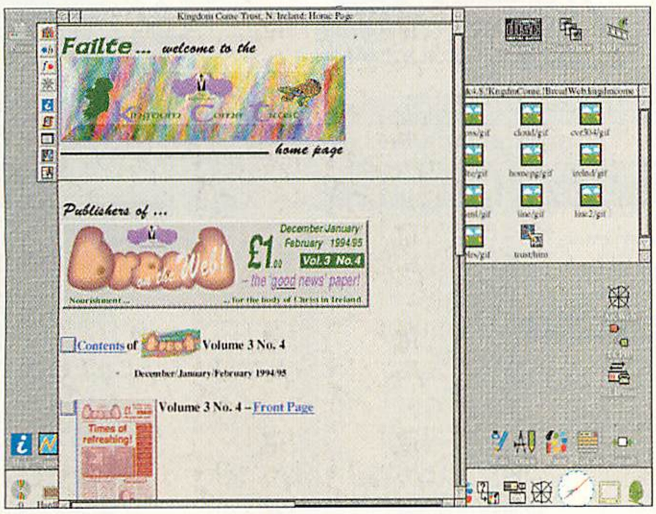
Bread on the Web is the World Wide Web version of the all-Ireland inter-denominational Christian magazine produced on an Acorn Risc PC and A410/1 machine. Published by Kingdom Come Trust – a charitable trust based in North Down and Dublin – the Web version runs to around 30 pages, and contains all the stories and photos from the normal hard-copy version.

Bread is read in Roman Catholic convents, Baptist, Pentecostal and house churches – as well as in the traditional Protestant denominations – from Coleraine to Killarney, and from Donegal to Wexford.

The present circulation of *Bread* in Ireland, and beyond, is around 2,500 copies plus. Each issue features news, interviews, book and album reviews (mainly Irish) and an A3 pull-out 'Diary' page of forthcoming Christian events over the next six months or so. The Web version went 'live' on the Internet on Wednesday 15th February.

The Web page shown here is the home page of *Bread* displayed by Stewart Brodie's *ArcWeb*, and both the hard-copy version and the Web pages are produced by the editor Raymond McCullough on an Acorn Risc PC and A410/1 using *Impression Publisher* and a Scanlight scanner, and proofed on *ArcWeb*.

The complete Web magazine can be browsed at the URL (Uniform Resource Locator) http://www.gpl.net/kngdmcome/trust.htm and you can e-mail the editor with comments and suggestions at: feedback@kngdmcome.The GAP.com



Web us this day our daily *Bread.*

Mistral blows into Brighton

THE South Coast gains yet another Internet provider – Mistral Internet, operating from Brighton. Mistral is part of a long-established software company writing for Windows, but by operating with very low overheads they are now able to offer a low-cost Internet access service.

Mistral has a KiloStream link to Pipex via 32 Nynex Cablecomms lines, which means free calls at evenings and weekends for local-area Nynex premium Cable TV package subscribers, and Mistral's bank of US Robotics V34 Courier modems are going to be in full demand. Will one 64K link be enough for more than a few simultaneous V.34 calls, one wonders?

The Mistral system uses the SLIP protocol with 'dynamic addressing' which somewhat limits the uses to which a subscriber's account can be put, but does include newsgroup subscription, e-mail and World Wide Web access. Mistral is also planning to offer some free World Wide Web page space to each subscriber. The monthly subscription charge is £9.99 including VAT, and for a further £9.99 per month, you can rent up to 2Mb of exclusive Web page space.

Mistral Internet plans to run a weekly mailing-list-style 'magazine' to keep customers in touch with latest developments, and the company says that customer support will be continuously available as there will always be staff on site. It is aware that Acorn subscribers will need special software support, and will be investigating use of the existing PD software (the Internet Starter Pack, as on the cover disc) with the system.

Mistral Internet
Tel: (01273) 708866
E-mail: info@mistral.co.uk

Ant Internet news

Ant Ltd is to start shipping its *Internet Suite* in the 'second quarter' of this year which looks like being a hot favourite for Acorn 'Netters. The suite includes the *Fresco* Web browser, Nick Smith's *Marcel Lite* e-mail and news package, and the RISC OS-style ftp filer. The single user version is expected to retail at under £100. Hey! It's the second quarter now – so get dialling!

Ant Ltd.
Tel: (01223) 567808
Fax: (01223) 567801
E-mail sales@ant.co.uk
WWW: http://www.ant.co.uk/

Goodbye! Hello!

Andreas Itzigehl, Sysop of the Berlin-based ARCway BBS, announces its closure from the beginning of April. ARCway was one of the few well-known Acorn BBSs in Germany but Andreas feels he cannot continue because Acorn is falling behind his high expectations. We're sorry to see him go. Another German BBS operator, Stefan Brük is having to reduce his commitments to the BBS scene for different and happier reasons – he and his wife are soon to become parents! Keep that Risc PC going for the little one, Stefan!

Acorn-friendly Demon

Demon Internet Ltd has taken on an Acorn-owning enthusiast as part of its customer support team. Dave Willams, whose name will already have been seen by existing Acorn subscribers and readers of Demon newsgroups, is a friendly and helpful point of contact for all Demon enquiries, including Acorn-specific ones. You can e-mail him directly to dave@demon.net.

Demon Internet Ltd.
(Sales): 0181-371 1234
(HelpLine): 0181-371 1010
(Fax): 0181-371 1150
E-mail internet@demon.net

Contacting me

You can contact the Comms page by writing to David Dade, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to: DaviD@arcade.demon.co.uk, Netmail to DaviD Dade FidoNet#2:254/27.0 or mail #2 on Arcade BBS 0181-654 2212.

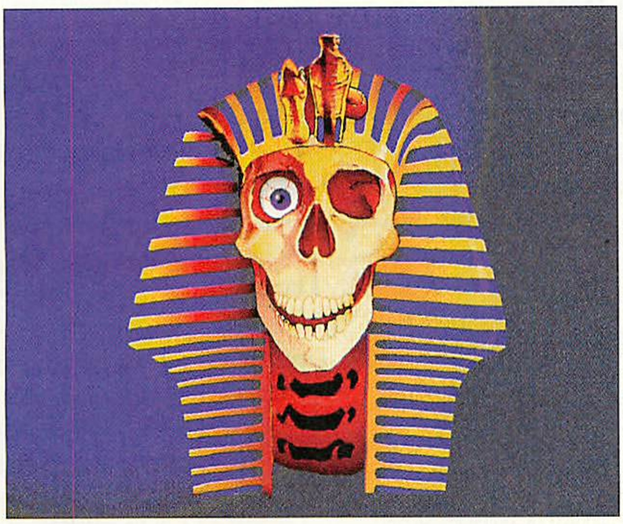
Rights of passage

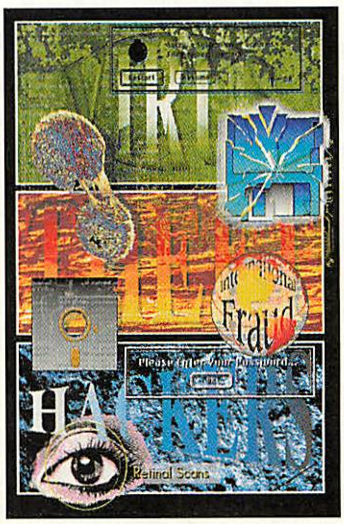
EVERYONE who produces pages of one sort or another uses an image, be it a texture, picture, or a bit of artwork. Some people have the luxury of commissioning artwork to order, others rely on clip art and image libraries.

Now all things being equal, that should be the end of the matter. However, the rise of the Internet has produced a variety of picture archives that offer global access to millions of images. A great resource for everyone everywhere – well maybe not.

Alas, the concept of ownership and copyright is playing catch-up with the technology and while it's doing so, an awful lot of the images transmitted around the globe are being used without permission. Copyright law prevents the unauthorised duplication, alteration, transmission or distribution of images and works. In order to do any of these things you must obtain permission from the holder of the copyright. Tracking down this holder is no small task and many images on the Internet are scans of photos or magazines taken without permission – you have been warned.

CD-based clip art libraries offer a safer alternative because permission has usually been obtained and the images are normally royalty free. This comes at a price as most clip art libraries aren't cheap – indeed the hefty prices are there to make up for the all too frequent breaches of copyright. Just like software, there's some truth to the argument that such hefty prices only encourage piracy, but clip art libraries on the Archimedes are almost universally affordable and as such should be encouraged to remain that way by not stealing their wares left, right and centre.





Not every image you come across will be royalty-free like these samples from MDI's Image Warehouse are.

From the sublime to the ridiculous

AS also reported on the Graphics page, someone has at long last written a driver to print to a Primera dye sublimation printer. Spacetech has developed a driver that runs in conjunction with *Photodesk* to print out 24-bit colour A4 pages. The continuous tone 200dpi output offers vastly improved colour depth over inkjet printers.

The Spacetech printer driver makes use of *Photodesk*'s rasterisation facilities to anti-alias adjacent printed pixels to create an affective four-fold increase in resolution. A complete kit is likely to set you back around £1200 + VAT, but is currently priced at £995 + VAT.

The printer isn't the best around; they'll set you back another £9000, but it does offer a level of colour reproduction previously unavailable at a very reasonable price.

It has always been possible to output to Postscript dye sub printers, but they cost more and are usually tied to PCs or Macs, thus complicating the printing process ten fold.

It has to be said that if Acorns are to be used to any degree in the increasingly colour-oriented printing/publishing world, these kind of output devices are absolutely necessary. This printer must be the answer to many people's prayers, and can only strengthen the Acorn printing/publishing portfolio.

Apparently, plans are already afoot at Spacetech to support other Primera printers.

Spacetech
Tel: (01305) 822753

Seeing the big picture

Have you ever wanted a really, really big print out? Acorn has just added the NovaJET III printer to its Risc PC-based publishing system. The NovaJET is a full-colour inkjet printer that handles A0 paper. The printer is driven by a standard RISC OS printer driver at 300dpi and at that size, believe me, there are a lot of dots. Hopefully, someone will be able to cough up the £11,000 for a complete system and offer a bureau service, otherwise it'll be an expensive way of getting one up on all those poor Canon users limited to a paltry piece of A3/A4 paper.

Acorn Computers
Tel: (01223) 254460

Tantalising textures

While out searching for some usable and affordable textures, I stumbled across The Image Warehouse CD from MDI. An Acorn version of the disc is available for an extra fiver over the price of the PC/Mac disc and contains twin sets of 256 colour sprites but the PC/Mac disc has a whole host of images as 2-bit TIFFs.

The £39.99 + VAT price tag can hardly be described as expensive and as well as a couple of dozen backgrounds and textures, there are a handful of scans of some excellent artwork.

MDI
Tel: (01252) 737630

Rapitech deal bears fruit for Acorn

The deal between Acorn's publishing division and the distributor Rapitech is already paying off. Five systems are rumoured to have been sold already, with the deal only a couple of months old. Next month I shall be looking at Rapitech in greater detail.

Contacting me

You can contact the DTP page by writing to me, Steve Powell, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to: stevep@acornusr .demon.co.uk.

Public Domain

Doggysoft strikes again

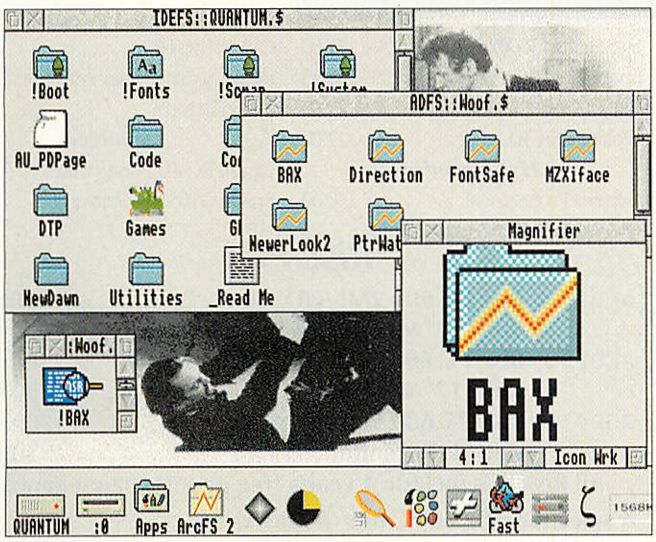
FOR some reason I've managed to avoid featuring any programs from the prolific PD and commercial group Doggysoft for quite some time. A disc packed full of goodies from Doggysoft coder Andrew Clover prompted me to write this feature.

First up is a tiny but really handy module designed for your boot up sequence. *Fontsafe* locks the font cache and stops games from reducing it to 300K. This prevents hours of waiting when you quit the game and the font manager has to redraw all the desktop text from scratch.

I always find a good desktop magnifier to be an essential tool for graphic and template designing work, and until now I've always relied on Mangify. I have to admit, though, that Ben Dooks of Doggysoft has come up with one better in the form of PtrWatch. All the scaling and window size functions are fully configurable and the high speed direct screen access is even Risc PC compatible.

Wherever Acorn fails to provide enough upgrades or support for RISC OS and its many sub-programs, Doggysoft always seems to come up with an answer. This time round, it's the good old BASIC assembler that gets the full treatment. *BAX* acts as a patch to your existing assembler and adds a host of new assembler commands. Everything from double and triple word addressing to included file commands are featured, as well as the complete *Floating Point Accelerator* instruction set.

BAX is Shareware and can be obtained (along with many other Doggysoft utilities) from: Ben J. Dooks, DoggySoft, 10 Woodside Avenue, Chesham Bois, Amersham, Buckinghamshire HP6 6BG. Program support is available from Furzefield Hq BBS on (01494) 681711.



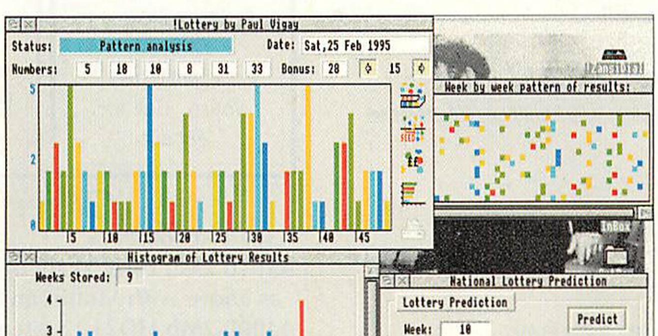
A suite of utilities from Doggysoft

Lottery programs

THE recent craze for the National Lottery has spawned all manner of weird and wonderful ways to predict which six balls will roll into place on a Saturday night. If you fancy a more accurate method than listening to Mystic Meg, put a few quid behind one of the new Archie Lottery prediction programs.

Two applications (which cunningly use the same icon and are both called *Lottery*) by Paul Vigay and none other than Captain Bibble, currently vie for the chance to select this week's numbers. Paul's version has an excellent range of graphs and distribution charts, but uses a rather strange random technique in its predictions. The Captain's program has a slightly less attractive interface, but uses a more statistically accurate approach to prediction.

Whichever program you choose, both are available from The Datafile PD on disc UT 218, online on Arcade BBS, or at Hensa on the net.



Could it be you?

TrackConv upgrade

TrackConv, the excellent music module conversion program, has been upgraded with yet more features and is now available as Shareware direct from the author. Contact : Chris Davis, 234 Prestbury Road, Cheltenham, Gloucestershire GL52 3EY.

Flood of mail

The last few months have produced quite a flood of mail from PD page readers, questioning me about various aspects of the PD scene. I'm quite happy to answer your queries, be they of a technical or beginners nature, but please remember to include an SAE. If possible contact me by e-mail as this provides a much easier and faster form of communication. My recent feature on Shareware has also created quite a discussion and I'd love to hear your views on the subject.

Beebware PD

In the context of the loss of many small scale PD libraries, I must give a mention to one of the small library success stories. Beebware PD has now been running for over a year and provides one of the most cost-effective services around. Check out the latest catalogue from: Beebware, 83 Forest Road, Huncote, Leicester LE9 3BH. If you run an Acorn PD library, please get in touch and I'll feature it on this page.

Flux update

The promised inclusion of the waveform display program *Flux* has unfortunately been delayed until next issue. The author, Peter Knight, has coded a specially updated version for Acorn User's PD Scheme. It features a RISC OS resident front-end, allowing use with your own music, and incorporates the extra speed of *Acorn User's Q The Music player.*

Contacting me

You can contact the PD page by writing to me, Paul Wheatley, at Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP. By e-mail to quantum@digibank.demon.co.uk or online on the Arcade BBS.

SENLAC Computing

PO Box 304
Brighton
BN1 1LE
Callers by appointment
Tel: (01273) 208074
Fax: (01273) 738258
e-mail: pete@senlac.co.uk
Compuserve: 100113,603

At the last minute again! I'm writing on the 1st April but there's no April Fool about our prices (especially as you'll be reading this in May!). The music bundles we introduced last month have created a great deal of interest and we have an ever expanding range so if you are (or would like to be!) musical, give us a call

Leasing: why not join the many schools and businesses which have found it to be an efficient and cost effective way of obtaining computer equipment. The process involves little bureauocracy and is generally much cheaper than an equivalent bank loans. Just to clear up some confusion though, lease deals are only available to business users and academic institutions and are not available short term (less than one year).

Schools, don't forget that we are an Acorn Advantage dealer so you can't lose with our low prices and Acorn's Advantage points.

Of course, this advert can only show a small selection from our range. So if you don't see what you want here please give us a call.

Pete Sykes

Acorn

Accounts

Personal Accounts v3	43.00
Prophet	168.00

Art & Graphics

Artworks *(on floppy or CD)*	145.00
Complete Animator	94.00
ImageFS	34.95
Image Outliner	83.50
PhotoDesk	180.00
Plot	74.00
ProArtisan 2	119.00
ProArtisan 24 *(Risc PC only)*	160.00
Studio 24	128.00

E-Type 2	29.25
Flashback	24.95
FTT (Formula 2000)	23.25
Lemmings Pack for Risc PC	25.50
Lemmings 2 - Tribes	25.50
Magic Pockets	23.00
Magnetoids	22.50
Sally and Wally	22.50
Scrabble	24.95
Sim City 2000 (RiscPC)	35.00
Sim City 2000 (A5000)	35.00
Simon the Sorcerer	35.95
Speedball 2	21.75

Music Specials

Sibelius 6
Fatar CMS61 Keyboard Controller Workstation
Audio Dynamics PowerWave 50
Yamaha YST-M10 Speakers & YST-MSW10 Sub-Woofer

All for only £790

Ask about our other bundles

Communications

ArcFax	33.00
ArcTerm 7	68.50
Courier v34 Fax *(with cable)*	395.00
Hearsay 2	76.95
Courier v34 Fax *(with cable)*	395.00
Sportster v34 Fax *(with cable)*	290.00

Consumables

Inkjet Refills	*from* 14.50
Print'n'Wear Packs	*from* 6.94
TDK DS/HD 3½" Discs	8.50

Databases

Data Power	145.00
Junior Database	57.00
S-Base 2 Personal Edition	140.00

DTP/WP

Easy Font 3	35.00
Formulix	75.00
Impression Publisher	145.00
Impression Publisher Plus	285.00
Impression Style	88.00

Games

Arcturus	22.50
Cannon Fodder	21.50
Crystal Maze	36.50
Diggers	27.95
Dune II	32.50

Star Fighter 3000	27.00
Spobbleoids	22.95
Virtual Golf	29.00
Wolfenstein 3D	27.00

Hypermedia

Genesis Professional	130.00

Integrated Packages

Fireworkz	103.00
Fireworkz Pro	160.00

Music/Sound/Vision

24i16 (1Mb)	430.00
Fatar CMS61 Keyboard w/s	260.00
DMI30 *(A3/4xxx MIDI i/f)*	85.00
DMI50 *(Dual MIDI i/f)*	97.75
Eagle M2	360.00
iTV TV Tuner Card	225.00
Lark A16 Sampler	225.00
PowerWave 30 *(inc DMI 30)*	208.00
PowerWave 50 *(inc DMI 50)*	229.00
Rhapsody 3	88.00
Serenade	88.00
Sibelius 6	165.00
Sibelius 7	*from* 540.00
VTX2000	390.00
Yamaha M10 Speakers	80.00
Yamaha MSW10 Sub-woofer	95.00

Printers

Canon BJ-10sx	185.00
Canon BJC-4000	355.00
Canon BJC-600e	420.00
Epson Stylus Colour *(720dpi)*	405.00
Turbo Drivers	49.00

Scanners

Canon IX-4015 + software	695.00
Epson GT6500 + software	595.00

Risc PCs

ACB15	**Risc PC 600 2Mb/HD210**	**1400.00**
	With 17" Monitor	**1870.00**
ACB25	**Risc PC 600 5Mb/HD210**	**1560.00**
	With 17" Monitor	**2030.00**
ACB45	**Risc PC 600 9Mb/HD420**	**1900.00**
	With 17" Monitor	**2370.00**

All Risc PCs include 1 year's free on-site maintenance.

A selection of Risc PC bits 'n' pieces...

8Mb SIMM	265.00
16Mb SIMM	435.00
32Mb SIMM	815.00
Cumana 300iA CD ROM Bundle	235.00
Cumana SCSI 2 Interface	190.00

Schools/ Businesses

Lease a Risc PC from as little as £43.50 per month over 3 years. Call for details.

Paying by Cash, Cheque, Connect or Delta?

You may deduct an

extra £35 discount

from the VAT inclusive price of your Risc PC!!

Other Computers

A3010 Action Pack	**285.00**
A3010 2Mb Early Years or Learning Curve	**380.00**
as above with **Multiscan Monitor**	**565.0**
A4000 2Mb HD210 System	**995.00**
A4000 2Mb HD210 HiRes System	**1035.00**
Early Years pack for A4000 or Risc PC	*add* 50.00
Learning Curve pack for A4000 or Risc PC	*add* 50.00
Home Office pack for A4000 or Risc PC	*add* 95.00
Pocket Book 2 (256k)	**255.00**
Pocket Book 2 (512k)	**315.00**

Dear SENLAC Computing, PO Box 304, Brighton, BN1 1LE,

I wish to order these items from you. I'm glad that I don't have to pay any more for UK postage and packing and that the prices you quote include VAT.

Item	£

My name and address are...

Post Code:

Tel:

...and I'd like to pay...

❑ *with the enclosed cheque*

❑ *by Access/Visa/Delta/Connect*

Number:

Expiry Date: __/__

Signed:

Date:

A day in the life of a motor re-manufacturer

JENKINS Motor Engineers in Whitton, Middlesex, is a specialist in engine re-manufacturing. As soon as you walk into the shop, you know you'll get good service because there's an A310 on the counter, as Mick Shaw explained.

'I bought it with the view of my son using it as well – playing around with it – and also using it for the business. I started with it in the office some five years ago and tried to find a software package to do the accounts, so looked at all the options.' At first he considered running *Sage* on the emulator. He sent off for the shareware program, *Page*, which is very similar, but 'there was no way I could handle that.'

After seeing a demonstration of Apricote Studios' *Account Book*, he thought it was just what he needed. 'I actually started using it in the office, entering transactions, and it was fine. It was fairly easy... Quentin (at Apricote Studios) was very helpful.

'Then *Prophet* came along. Well, this was much, much better. And here we are today running from 8:30 to 5:30 on the counter all day long.'

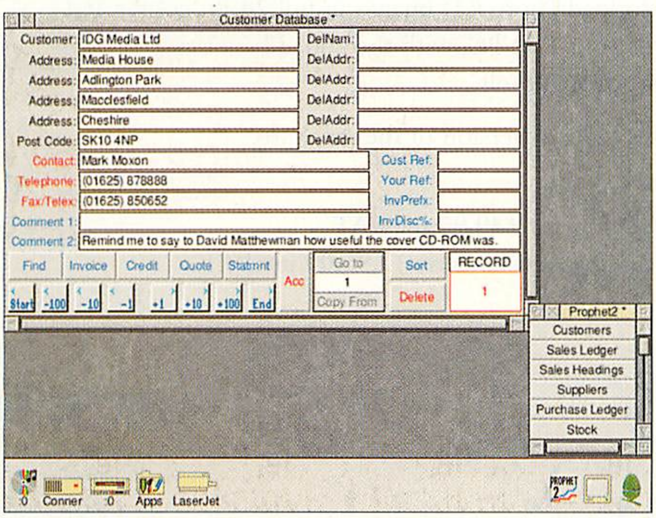
An A5000 has taken up residence in the office and Mike has also got a Risc PC up in the flat where he lives – these are connected by Access. He finds the free site licence from Apricote most useful.

With PCs becoming more and more the ingrained industry standard, does he have a lot of confidence in the Acorn platform?

'Yes. What they produce is absolutely brilliant – some of it is really good, particularly with the Risc PC and all the art packages. I don't think I've ever, ever had a program that's crashed. I've looked at *Windows* applications and PC work and just can't seem to get on with it – it looks so ... ugghhh.'

Why would he recommend *Prophet* to other people?

'I would say ease of use – it's easily editable and you can see on screen where things are going. What I like about it is that if you've got the windows open you can see what's actually happening with it – if you want to. I like it – I'm lost for words really,' he chuckles. 'It's error proof – that thing's been sitting on that counter for two years now and there's not been a single glitch, crash or anything. And everything is still as true now as it was then.



'I don't think I've ever, ever had a program that's crashed.'

'Being in the motor trade my hands are dirty, so I don't want to pick up the mouse and play around with it virtually everything in *Prophet* can be done by the keyboard. To my mind it's so friendly – it's very difficult to make a mistake with it.' However, Mike is rather sceptical about non-editable accounts packages, such as *Enterprise* and *Sage*. 'In *Enterprise*, and all the others, you just can't see what's going on. We're not accountants.' As he only has a handful of people on his payroll, Mike is right at home with *Payroll Manager* from Silicon Vision.

If you pop upstairs into the flat, you'll find a charming 10Mb Risc PC and you can tell he has good taste due to the mound of ageing *Acorn Users*. Looking at the plethora of software packages on the shelves above the machine, you can see he is quite a collector of databases.

'What I wanted to do was to create a database where I could look up Ford and it would give me a list of pistons, bearings, gaskets – the whole works. I got *S-Base* on a mad impulse really, but you need to be a programmer, and I just haven't got the time.' However, the newer *S-Base 2* doesn't require programming.

'*Impact Pro* seemed to offer some solution to it, but again I really haven't had the time to sit down and try it. I saw the database on *Advance* and that, to me, was so easy to use I bought the package. It will do what I want to do fairly easily, and within a few minutes I had created a database.' As many of you will know, the *Advance* database is a cut-down version of *DataPower* from Iota.

Although he has *Fireworkz*, he continues to use *Pipedream*. This is because he has so much data stored in it and finds he's so used to the package, he doesn't want to swap. Sometimes the old is just as good as the new.

No Acorn business software

A letter in the March issue made the bold claim that except for *Impression Publisher* 'there is still no serious business software' for Acorn machines. This is totally untrue – at least in my opinion.

Those holding that view tend to be the uninformed. If there is no serious business software, perhaps the likes of *Fireworkz Pro, Eureka, DataPower, Prophet* and *Enterprise* should be discontinued, to name but a few. That's not to say there aren't one or two gaps. However, the Acorn platform is starting to establish itself in small businesses – companies like Jenkins for example. As a matter of fact, we received a huge amount of positive feedback from the Business case-study issue – September '94.

In the short term, the PC card will cater for specialist features like Gantt charts. Beyond that, I consider there will come a time when there won't be any perceptible gaps whatsoever.

Organising contacts

Following on from the release of *TableCalc*, its budget spreadsheet and tabling package, iSV Products is presently developing *SalesMan*. This is to be a sales-orientated contact manager with contact log sheets, automatic phone scheduling and to do lists.

iSV Products
Tel: (01344) 55769

Shares 4

Version four of the stocks and shares portfolio package, *Shares*, has just been released. Its main new feature is a multi-graph facility which allows users to compare up to five shares simultaneously. The program still retails at £39.95 inc VAT.

Apricote Studios
Tel/Fax: (01354) 680432

Contacting me

You can contact the Business page by writing to me, Alex Singleton, at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP, or by e-mail to: alex@acornusr.demon.co.uk.

Education



Matthew Evans's winning *Street* Scene using *Spex* – see the story opposite.

CD site licences – no piracy please

ANYONE who has read *Acorn User* more than once will know that I have no time for software piracy, and I know I speak for the whole editorial team. As a teacher, I feel I must be *seen* to be working within the law, so I always purchase a licence for multiple use if the software will be used on the network. That's the theory, but it's not always that easy. Last month I reviewed some new CD-ROM releases but only included the prices for standalone use. Why? Because with two exceptions, site licence prices had not been fixed by the companies. In fairness, two of the releases were so new that pricing of any sort hadn't even been considered and another company was thinking it through, and in so doing contacted me to ask for my opinion on a suitable licence price. One company I contacted told me that at present there wasn't a policy for multiple use, so I should assume it was OK to use it on the network. (Perhaps I could read this out in court!)

I accept that there are not many schools who are in the fortunate position that I am in, whereby several CD-ROMs can be exported around a network. But my position is not unique, and the number of schools who can network CD-ROMs is not going to get smaller – quite the reverse, in fact.

So here I am holding a fistful of money and wanting to spend it on licences, but nobody seems very keen to take it from me! Yet the same people are screaming about piracy damaging the industry. Curious, very curious.

More rabbit than Sainsbury's

SOFTWARE in general, and CD-ROMs in particular, have come a long way in the last year. In particular, the use of speech is now often fundamental to the use of the software and not just a gimmick tacked onto the end. But spare a thought for the poor IT teacher stuck in a classroom with 25 computers rabbiting away! What is needed are cheap headphones to avoid noisy lessons. Actually what is really needed are cheap indestructible headphones, but even if you could get them for £3 a pair, that's still a lot of money to equip a large Information Technology department. I tell my students to bring in the headphones from their personal stereos – these are fitted with 3.5 mm jack plugs and will plug into the socket on the back of the computer. I'm not keen on kids plugging things into the computers, nor messing around behind them, but at least this way I don't have to provide sets of headphones, repair them when damaged or replace them when lost. Most important, being in the Information Technology room means not being bombarded with 30 computers all talking at the same time.

New SPEX scenes

Aspex, the producer of *Spex*, has added two more environments to its popular design program: *Classroom* and *Leisure Pool.* A couple of months back I suggested readers could send a *Street* or *Moonbase* scene to me and I would print the best one and give a small prize. The winner is 9-year-old Matthew Evans from Peters Hill Primary School, West Midlands. Well done Matthew; a copy of *Classroom* will be winging its way to you with the compliments of Aspex.

Aspex Software
Tel: (01822) 611060

Clicker moves forward

Back in September I received a program called *Clicker* by Crick Computing and was so impressed with it, I included it in that month's education page. *Clicker* displays a grid of cells, each cell containing a word, letter or picture. Click on a cell and the word can be printed at the caret or a sound file played. The user can define grids of cells and decide what happens when each cell is clicked upon. The latest version, called *Clicker Plus*, has been updated to include colour graphics and symbols, access to CD-ROM and video, as well as sound and text. This is a brilliant multimedia program for mainstream primary and special needs students of all ages. *Clicker Plus* costs £55 and there is a £20 upgrade for existing *Clicker* users.

Crick Computing
Tel: (01604) 713686

Cover disc extra

In the May issue I wrote about two National Curriculum files on the cover disc – a *Draw* file giving all the targets and a *DataPower* database of the same. Unfortunately the files were missed off the disc and so are reproduced on this month's; they were also on April's cover CD-ROM.

Contacting me

You can contact the Education page by writing to me, Geoff Preston at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to GPreston@arcade.demon.co.uk.

THE FAR SITED OPTION!



If your site has more than three machines then a site licence might be your best option.

Site licences were originally designed with schools in mind, but they work equally well for any organisation that has several machines on one site. The exact number at which a site licence becomes economical varies with the product, but if your site has more than three machines then it's worth investigating further.

Impression Publisher, Impression Style, TurboDrivers and ArtWorks are the most popular licences. Impression Publisher and ArtWorks come in two forms — for use on a network or for use with stand alone machines. Network licences are AUN compatible and can run over Econet, Ethernet or Nexus virtual econet networks.

The licence fee includes one complete package with manuals and hardware keys where necessary. The purchase price of a single copy of Impression or ArtWorks, if one is already owned and registered, can be offset against the fee. The licence covers up to 20 machines, but for the larger sites additional units of 10 can be bought at a later date

Think of it this way; if your site has 20 machines, an Impression Publisher network licence works out at £33 per copy, when the RRP is £169. We're sure you *will* agree that this pricing is attractive, which is why 4000+ sites have Computer Concepts licences.

Impression Publisher stand alone £550
+ £15 per machines for each hardware key

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no hardware key required

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TurboDriver & LaserDirect network spooler £149

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Portables

Purple rain

OVER the next few columns I will be taking a look at some of the bigger companies who are producing software for the Pocket Book. This month, it's the turn of Purple Software, a company that produces the following impressive range of software.

The Pocket Book has few faults but if I had had to compile a list, it would have included the poor database and lack of graphic-oriented programs. Now, thanks to a range of software, I can cross both these and more off the list. *FloChart*, *OrgChart*, *DrawIt* and *DataView* are a set of programs written by Purple Software which in my opinion fill small, but noticeable gaps in the Pocket Book and Pocket Book II's software library.

FloChart and *OrgChart* are, as their names suggest, programs which enable you to draw complex flow or organisational charts respectively. *FloChart* comes complete with the full set of ANSI flow chart symbols, all of which can be re-sized, rotated or given different line styles and thicknesses. The program incorporates an excellent method of joining shapes: enter join mode, select join type and then click using return on the shapes you wish to join. Easy! It also features 39 arrow styles, full alignment of shapes and text, full interactive help, page grid and excellent graphics printing. Highly recommended!

OrgChart is similar in design to *FloChart* but its shape library is oriented more towards organisational charts. *OrgChart* allows each entry to contain a title, contents and notes section, with each part having different fonts and styles if required. Apart from this, the program contains many of the features that *FloChart* has and is also highly recommended.

DrawIt is an object-oriented drawing package for the Pocket Book. It comes with 19 pre-defined shapes, each of which can be given a wide range of different line styles, thicknesses and fill types. The program comes with a fully featured text editor offering different styles, fonts and sizes. The application also features .BMP export facilities, a definable page grid, full graphics printing, online help, print previews, and full grey support on the Pocket Book II.

The Pocket Book is admittedly never going to compete with the likes of the Risc PC for graphics, but if you have the need to draw on your Pocket Book then this is the package for you.

DataView is an excellent database program which turns the rather feeble Pocket Book database into a fully featured one. *DataView* enables you to sort and search on different fields and allows you to perform 'AND' or 'OR' style searches. It also enables you to print out labels, and included with the package is a wide range of pre-set label designs to help with this.

However, in my opinion the best aspect of *DataView* is the mail-merge facility with *Write*. This allows you to automatically transfer and print out documents from *Write*, incorporating your data from *Cards*. If you can only afford one package for your Pocket Book then this must be it.

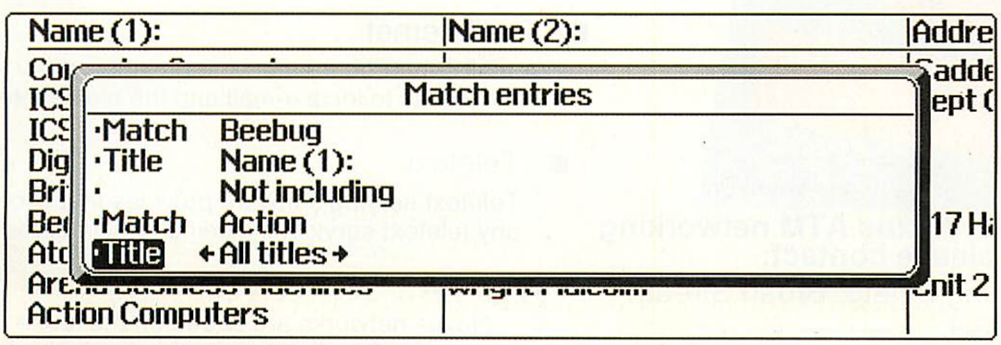
Overall, this software must be some of the best I've ever seen for the Pocket Book. Having also had a quick look at *Paint/Compose* and *FileManager* (both by Purple Software), I can also recommend both these programs.

As well as producing these programs under its own name, Purple Software also writes some programs for Widget Software (whose phone number is in the In Brief column).

Purple Software
Tel: 0181-531 8384

Product information

Product	Price (on SSD)	Price (on disc)
DataView	£51.02	£38.26
FileManager	£34	£25.49
OrgChart	£42.51	£29.75
FloChart	£42.51	£29.75
DrawIt	£42.51	£29.75
Paint/Compose	£51.02	N/A



Searching is easy with the excellent *DataView*.

Pocket CDs

Widget Software has just released a PC CD-ROM which contains 428 programs and utilities for the Psion 3 and Acorn Pocket Book Range. It costs £49.95 and is available now.

Widget Software
Tel: (01438) 815444

And again

Also recently released is Datafile's PD CD 1 – Issue 2. This now contains all the Pocket Book software I looked at last time and more. It's cheaper than Widget's offering at £36, yet contains nearly as much software plus much more native Acorn material, and would definitely be my first choice. With both CD-ROMs the software can easily be uploaded to the Pocket Book with an A-link.

The Datafile
Tel: (01934) 823005

OPL blues

I've had a huge response to my request for OPL programs – not one single application! So come on all you budding programmers, fame and fortune beckons so send me some software.

The unsupported A4

At the top of this page it says Portables, which should mean both the A4 and the Pocket Book, so why is it, you may ask, that in every column so far the only portable mentioned has been the latter. The reason is simple – nothing is happening in the A4 market and until something does, this column, unfortunately, will continue to be Pocket Book oriented.

Contacting me

You can contact the Portables column by writing to me, Mark Taylor at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or by e-mail to: markt@acornusr.demon.co.uk.

Cover disc

Internet starter kit part 2

Compiled by Alan Hassey

THIS month we have the second part of the Internet starter pack for the Archimedes on our cover disc. In order to use it you will also need the files that were on last month's disc, and certain operations will need files from next month's disc as well (the complete pack was on April's CD-ROM). The software requires RISC OS 3.1 to run – you will also need a modem and an account with an Internet provider.

The first step is to unarchive the first two parts of the software by copying them to a directory, preferably onto your hard disc. Apart from the fact that the software may not run properly from an archive, configuring it involves altering files, and it is best to have an original copy to go back to if something goes wrong.

When you have copied all the files across you should have a display similar to figure one. Note that two of the applications – *TTFN* and *NewsBase* – are highly incomplete at the moment and will not run until next month's instalment of the starter pack. The next step is to move the program *SerialDev* from the *SerialDev* directory into the root directory of the starter pack. This is because it contains resources used by other programs in the suite, and must be seen by the Filer when they are. Now, *reset your machine*. If you do not do this, the Filer will still contain references to all the applications within the archives, rather than to the copies you have just made.

At this point you can really go no further until you have an Internet account. You will need an account with a provider who can supply a SLIP connection. The cheapest and most popular national Internet provider is Demon Internet Ltd, and the configuration program is set up for someone with an account with Demon. A Demon Internet account costs £10 per month, with an initial £12.50 set-up fee. To get an account, call 0181-371 1234, or wait until the next issue of *Acorn User*, when we will hopefully be offering a one-month trial subscription deal.

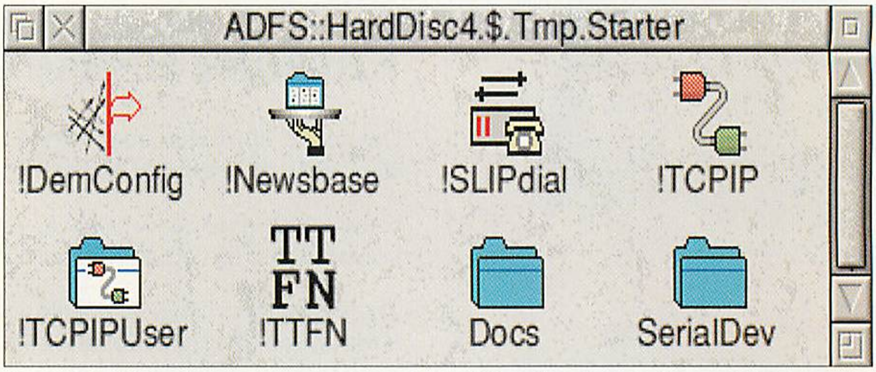


Figure one – this is what the Internet starter pack should look like when you have copied it to your hard disc.

Once you have your Demon account, run the *DemConfig* program. This will present you with a set of configuration options. The program fully supports interactive help and should be run to give more information on the settings; there is also an excellent guide to its use in the *Docs.Guide* file, which you should have read anyway. There is just one comment to add to this: it is best to set the modem speed to a non-zero value such as 57600 or 19200, otherwise *SlipDial* may not function correctly.

If you have run *DemConfig* before collecting the entire starter pack, a series of 'file not found' error messages will appear. This is not fatal, it simply means the *TTFN/NewsBase* side of the configuration will not have happened. *SLIPdial* and *TCPIP* will have been configured correctly. If you had the whole starter pack you will now have a correctly configured system.

To connect to Demon, run *SLIPdial*. Two icons will appear on the icon bar, and the *SLIPdial* window will open. Wait until the text 'Waiting...' appears in the *SLIPdial* window; if you try to do anything before this has appeared *SLIPdial* will crash. Clicking on the left-hand *SLIPdial* icon on the icon bar will automatically dial the Demon POP that you selected in *DemConfig*, loading in *TCPIP* once connected. I suggest you read the *Docs*.FAQs.Guide1_21 file on the operation of *TCPIP* if you have not already done so, because describing all the features of the program is beyond the scope of these pages.

If you have connected to Demon, but have not yet got the whole starter pack, you can download the latest version from the ftp (file transfer protocol) site at Demon. Using the pop-up menu in the top right corner of the *TCPIP* window, choose the 'Demon' entry on the 'FTP' sub-menu. An ftp window will open, and you will be connected to the Demon ftp site. At this window type:

```
cd /pub/archimedes/acorn-starter-pak
get StarterPak.spk
```

which should download the starter pack onto your hard disc. Double-clicking on the *TCPIPuser* directory will open a window containing the file which should have its type set to 'Archive'. This should then be able to be opened by *ArcFS*.

The Acorn User survey

Author: Michael Rozdoba

THIS program offers an alternative method of completing the *Acorn User* survey which is on page 51. Simply run the program (which has not been archived, so should run on RISC OS 2 machines with no trouble) and answer the questions. When you have finished, send your *Answers* file to the *Acorn User* office, by post or e-mail. The address to use is given after the last question.

Note that on questions 27 and 28, answering the bottom four questions will appear to clear the top four. Your answers will have been recorded nonetheless – this is a problem with having two sets of icons with the same ESG.

Once you have saved out the file containing the answers to the survey, it can be posted to *Acorn User* Survey, FREEPOST (licence SK502), IDG Media, Media House, Adlington Park, Macclesfield SK10 4YR, e-mailed to survey@acornusr.demon.co.uk or to Acorn User (user #790) on Arcade BBS.

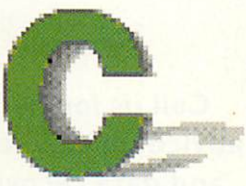
Please take the time to complete the survey. It is only through such feedback from our readers that we can continue to deliver what you want to read in the magazine.

It will cost you nothing if you use the freepost address, but will be invaluable to us.

Article tie-ins

Various authors

THERE are several archives on the disc which tie directly in with articles in the magazine:



● C for yourself: the *C* archive contains a program illustrating the use of the printf(), scanf() and various file-handling functions which accompany the C tutorial on page 100 of the magazine. As is usual, the *c* directory contains the source code and the root directory the compiled and linked program.

● The *ReportGen* directory contains some files for various databases as detailed in the article on report writing on page 86.

● Finally, the *March* directory has some files which should have been on the March disc, but which were inadvertently missed off. They give the IT targets for key stages 1 to 4.



● The education section: the *NCC* file in the *KS2* directory contains a list of the programs reviewed in the Key Stage 1 and 2 round-ups in this issue and the January issue of the magazine, with an indication of which areas of the National Curriculum they are designed to address.

● Run the RISC: the *MikeCook* archive contains a program to accompany Mike Cook's article on page 89 of the magazine.



● ∗INFO: the *StarInfo* archive contains all the programs that go with the ∗INFO article in the magazine.

Disc problems

OUR cover discs are tested thoroughly at every stage of production, but one or two faulty discs may slip through. If you suspect you have a faulty disc, check whether it verifies by choosing 'Verify' from the menu produced from the floppy disc icon on the icon bar.

If the disc does *not* verify, it is physically faulty and should be returned to TIB, TIB House, 11 Edward Street, Bradford, Yorkshire BD4 7BH, who will replace the disc free of charge. Note that this address has changed recently.

If it does verify, contact the editorial office at *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP or telephone (01625) 878888.

While we do test all the programs on the cover disc, we are unable to try them on all possible combinations of computer, hardware and software. We try to support RISC OS 2, but much of the software written for the disc does require RISC OS 3.1 or above, as software writers are switching to the new operating system. Do let us know of any problems.

The *Acorn User* cover disc has been checked for viruses using *Killer* version 1.902 from Pineapple Software.



PhONEday utilities

Authors: Quantum Software and Iota Software

IF you are having problems updating your database of phone numbers because of BT's sudden desire to stick an extra 1 in most phone numbers, don't despair. Help is at hand in the form of a couple of utilities in the *PhoneDay* archive on the cover disc.

Quantum Software, author of the *Keystroke* application, has provided a *Keystroke* file for converting most numbers. Running the *Executor* program will allow you to use two keystrokes for converting a number: Alt-Q for a number in a writable icon and Alt-W for one in a portion of selected text in *Impression*. The two applications, *PhoneDay1* and *PhoneDay2*, perform the same operations, if you prefer to use them rather than the keystrokes. If you have the *Keystroke* application, you can set it up to work through all the entries in a database automatically. Note that the utility copes correctly with phone numbers in Leeds, Nottingham, Sheffield, Leicester and Bristol, which don't change in the standard way, and with BT phone numbers which don't change.

PHONEDAY

Iota Software has provided a similar utility for use with its *DataPower* database. Since the *DataPower* engine is used with both *Advance* and *Recordz*, the utility will work with these programs also.

1 Disc Rescue



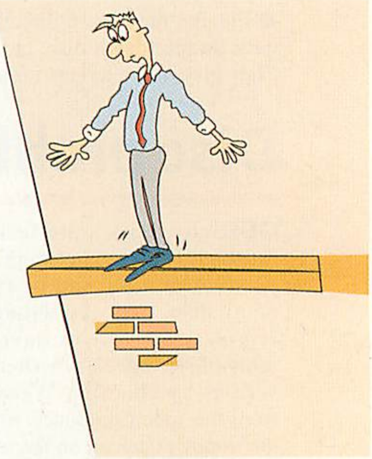
Archimedes Disc Rescue £35

- Repairs and recovers floppy discs and hard drives
- Three easy-to-use utilities
- Sophisticated disc editor for more confident users
- Comprehensive 90 page manual
- RISC OS 2 & 3 compliant

"...a well written, highly usable suite of utilities with a window-based editor at the core and **an excellent manual**."
Acorn User, July '92

Call us for FREE advice on disc repair and data recovery

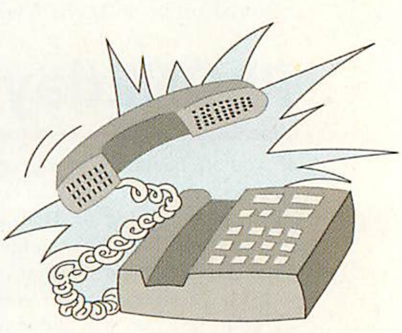
2 Font Directory



Font Directory £35
"This program provides the kind of facilities which should have been built into the operating system in the first place. It is very easy to use, and I find it utterly invaluable. **Anyone who has more than a handful of fonts should buy it without delay.** It is superbly presented, operates flawlessly, and has become a permanent addition to my iconbar."
RISC User, Jan/Feb '94

Call us for 10 days FREE trial of Font Directory
(UK residents only)

3 Bitfolio®



Cartoons £20 – 104 superb cartoon characters
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Xmas Collection £20 – 100 jolly festive designs
Bitfolio CD6 £60 – over 1900 clipart images

- Clipart images exquisitely drawn in full colour
- Supplied in draw file format (not scanned)

The images used in this advert are taken from the Cartoons & More Cartoons clip art collections

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Mark Moxon
Editor, Acorn User

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FOR OFFICE USE ONLY
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2 The free gift/special offer I would like is (please tick one):

4162	☐	Pipedream 4	Only £5	
4163	☐	Stunt Racer 2000	Only £5	
4164	☐	Conjugez	Only £5	
4165	☐	Simon the Sorcerer	Only £25	
4154	☐	Sensible Soccer	FREE	
4156	☐	Pandoras Box	FREE	
4166	☐	Enter the Realm	FREE	
4167	☐	Chopper Force	FREE	
4168	☐	Carnage Inc	FREE	

◆ Please remember to either add the appropriate amount when you write your cheque or if paying by direct debit, send additional payment.

3 Deliver to:
Name ....
Address ....

....

Postcode .... Tel ....

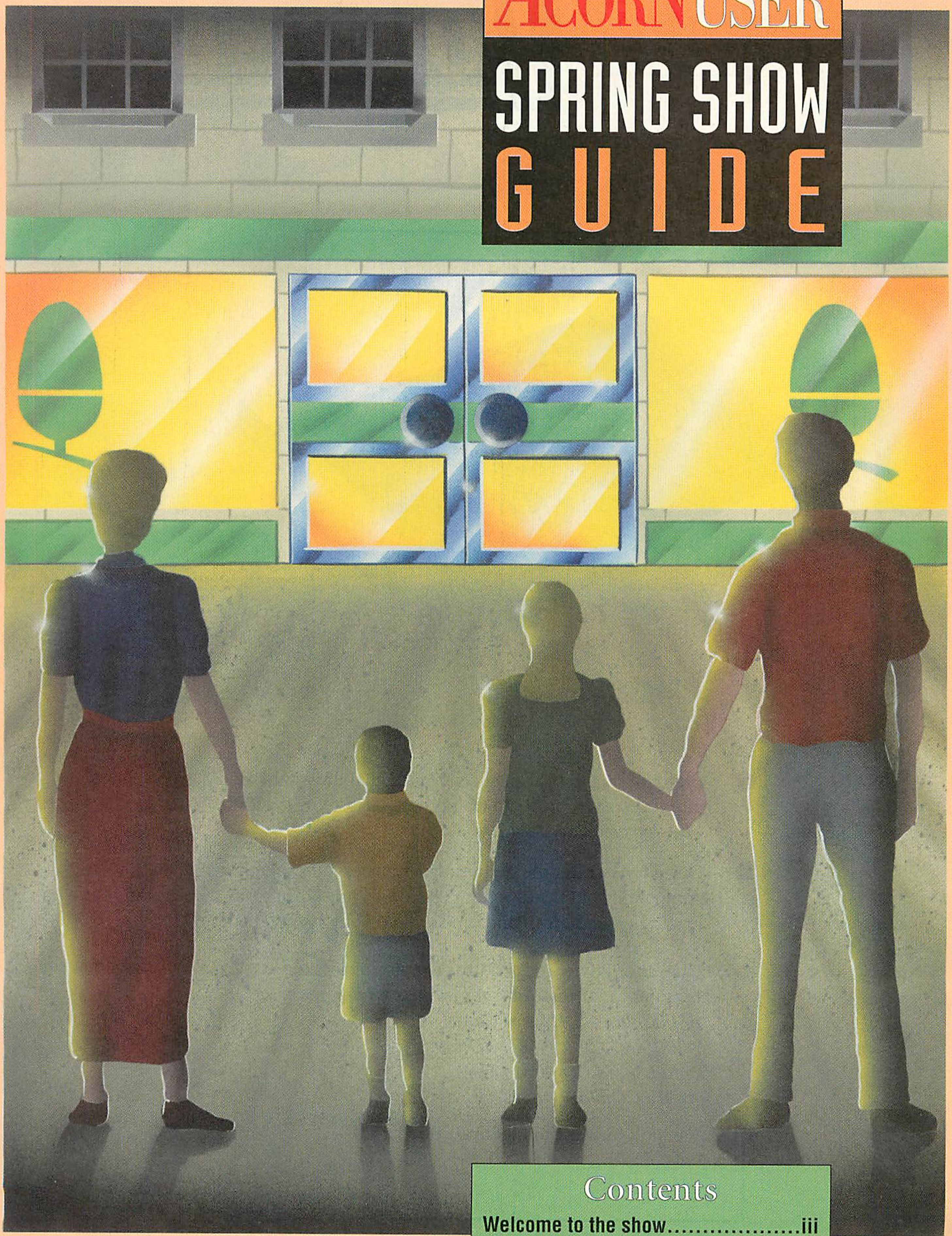
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SPRING SHOW GUIDE



International Conference & Exhibition Centre, Harrogate on Saturday 6 May & Sunday 7 May from 9.30am to 5.30pm

Contents

Welcome to the Show...

Message from the organisers

Welcome to the third great *Acorn User* Spring Show.

The Show is growing each year and provides a unique opportunity for Acorn computer users to check out the latest products and have some fun as well.

Both days this year see celebrity visits, and the packed theatre programme will keep you enthralled for hours. One lucky visitor and guest will be flying high and at twice the speed of sound on Concorde as winners in our free draw, and there are many other interesting features to help make your visit a day to remember.

From novices to experts, help is on hand to answer your questions and sort out your problems. Remember that choosing the right hardware or software is very important, so take the opportunity and time to test out all the options and don't be afraid to ask questions if in doubt. For general help, you can call in at the *Acorn User* stand or the Club Corner, or why not grill the folks from Acorn Computers themselves, who can advise you on any aspect of using their computers for education, leisure or business.

Of particular interest this year are the features on the Internet. Silicon Village are well informed on computer communications and can answer most of your questions on the Internet, and there are several exhibitors who can assist with Internet access software for your Acorn machine, or provide you with a connection service.

Have a great day!

Geoff Potter
Safesell Exhibitions

The *Acorn User* Spring Show this year has much to offer the existing Acorn computer user as well as those who are considering the purchase of computer equipment for home, education or business use.

This 16-page guide to the Show will tell you everything you need to know about the event, from details of every stand to what's on in the Show Theatre.

Celebrities

Adding interest to the event this year will be personal appearances by television presenters Dominik Diamond and Violet Berlin.

Dominik will be at the Show all day on Saturday 6 May signing autographs, trying out the activities on various stands, presenting prizes and helping out in the theatre. Violet will be at the Show all day on Sunday 7 May carrying on where Dominik left off.

Theatre

One of the theatre presentations will feature a short experience of the enchanting adventure game *Simon the Sorcerer*, from Gamesware. With stunning graphics and speech, this charming interactive game can be played by individuals or as a family, where everyone can help Simon unravel the secrets of the strange book recently found in the attic. There are dozens of scenes in the full adventure but we will be helping Simon in the dragon's cave scene where he has to work out how to retrieve some gold without being burnt to a crisp!

The theatre programme will include celebrity spots, prize giving and the grand Concorde competition draw at 5pm on Sunday.

Concorde draw

Every visitor to the Show will have the opportunity to win a fabulous flight for two on Concorde and travel at twice the speed of sound. With champagne to start off with and a never-to-be-forgotten trip lasting approximately one hour 40 minutes, the lucky winner and their chosen lunch time partner will take some time to return to earth after this fabulous 'Flight of Fantasy' from the large selection offered by leading Concorde travel specialists, Goodwood Travel.

On entry to the Show, each visitor (young or old) will be given a draw card to fill out and take to the *Acorn User* stand. The first card to be drawn out of the hat in the Theatre at the end of the Show on Sunday will win this wonderful prize. If the winner is not present at the Show at the time of the draw, the good news will be relayed to them by phone or letter.

Lots to see

There will be in excess of 60 exhibitors at the Show, including Acorn Computers, showing a wide range of hardware and software for Acorn computer users.

It is expected that the IBM-compatible PC card from Acorn will be available in large numbers by the time the Show arrives. This 'plug-in' board can instantly turn the Risc PC into a fully-operational dual-format computer of amazing abilities, capable of running dedicated DOS and Windows software alongside traditional Acorn programs, and at the same time if required.

Little Acorns play stand

With all those grown-ups around, things can be a bit daunting when you are small, so the Little Acorns stand is an ideal place to spend some time with people your own size and to check out some computer programs you can actually understand.

This stand, designed with the four to nine-year-old age group in mind, is sponsored by Sherston Software with assistance from Skillsware, and will allow parents to leave their children in capable hands for up to half an hour, where they can explore the computer worlds of *Rosie & Jim*, *Playdays* and other delightful entertaining and educational software.

Sweets and rock (with *Acorn User* all the way through!) will be on hand to ensure that good fun and sticky computers are the order of the day.

Internet feature

Visitors to past *Acorn User* shows will not have failed to notice the irrepressible team from Silicon Village, usually in fancy dress and having a great time. This year you will find them sunning themselves at the Cyber Beach Surf Club where they will be only too pleased to teach you the basics of surfing the waves of the Internet. Whether using your Acorn computer in RISC OS mode or PC mode, Silicon Village can help you get connected so you can head out to sea in search of that huge wave which will bring you new experiences and excitement on the Internet waves.

Schools project

Akalat Publishing is sponsoring the Schools Project stand, on which children from St Peter's C of E Schol in Harrogate (on Saturday) and another local school (on Sunday) will be showing how to put together a guide to the local area on Acorn equipment.

Archive bring and buy

Archive magazine will be running a Bring and Buy from its stand, all for charity. If you have any old computer equipment, hardware or software, which you would like to donate to a good cause, do bring it along wioth you to the Show and hand it over at stand number 2. And if you're looking for a second-hand bargain, make sure you go and have a browse.

Theatre timetable

The free theatre programme has been created to entertain and inform you, and to demonstrate some of the new products available at the show. You can walk into the Theatre, situated at the back of the hall, whenever you like – there is plenty of standing room towards the back if all the seats have been taken. The timings and content below are provisional and may be subject to change, so please check the programme boards outside the Theatre each day.

Saturday 6 May

Time	Company	Title
1030-1050	VTi	VTX2000 music software with Sonor sampling package
1100-1120	Sibelius Software	Composing at speed
1130-1150	Acorn Computers	What's new at Acorn
1200-1220	Computer Concepts	Movie Magic
1230-1250	Clares Micro Supplies	Image composition – putting together the pieces
1300-1320	Acorn Computers	Travelling the information superhighway
1330-1350	Longman Logotron	CD-ROMs: Photobase
1400-1420	Acorn User magazine	Composing magazines and CD-ROMs
1430-1450	Anglia Multimedia	CD-ROMs: Garden Wildlife and Castles
1500-1520	Gamesware	Simon the Sorcerer
1530-1550	Oregan	Video editing and mixing studio for the Risc PC
1600-1620	Spacetech	Photodesk
1630-1650	Oak Solutions	Apollonius: revolutionary CAD
1700-1720	Acorn Computers	What's new at Acorn

Sunday 7 May

Time	Company	Title
1030-1050	VTi	VTX2000 music software with Sonor sampling package
1100-1120	Sherston Software	Talking animated alphabet
1130-1150	Acorn Computers	What's new at Acorn
1200-1220	Computer Concepts	Movie Magic
1230-1250	Oak Solutions	Apollonius: revolutionary CAD
1300-1320	Clares Micro Supplies	Image composition – putting together the pieces
1330-1350	Oregan	Video editing and mixing studio for the Risc PC
1400-1420	Acorn User magazine	Composing magazines and CD-ROMs
1430-1450	Acorn Computers	Travelling the information superhighway
1500-1520	Gamesware	Simon the Sorcerer
1530-1550	Sibelius Software	Composing at speed
1600-1620	Anglia Multimedia	CD-ROMs: Garden Wildlife and Castles
1630-1650	Acorn Computers	What's new at Acorn
1700-1720	Concorde Draw	Who gets to fly at twice the speed of sound?

Notice board

The show is being held in Hall C of the Harrogate International Conference and Exhibition Centre, Kings Road, Harrogate, North Yorkshire HG1 5LA.

Times

Saturday 6 May 9.30am to 5.30pm
Sunday 7 May 9.30am to 5.30pm

Tickets

Adults	£5 (advance)	£6 (on door)
Under 16	£2 (advance)	£2.50 (on door)
Family	£12 (advance)	£15 (on door)

(A family ticket covers 2 adults and up to three Under 16s)

Available from Safesell Exhibitions on (01737) 814084, or by post to Safesell Exhibitions Ltd, Market House, Cross Road, Tadworth, Surrey KT20 5SR, or by fax on (01737) 814085.

Catering

Catering facilities will be located in the adjacent Hall B, which is easily accessible on the same level as Hall C. Purpose-built catering outlets will supply a wide range of sandwiches, drinks and hot and cold snacks.

First aid

In the first instance please go to the Organisers' Office.

Disabled

There are disabled toilets in Hall C. The main entrance and exit of the exhibition are sloped. If you need any assistance, please ask.

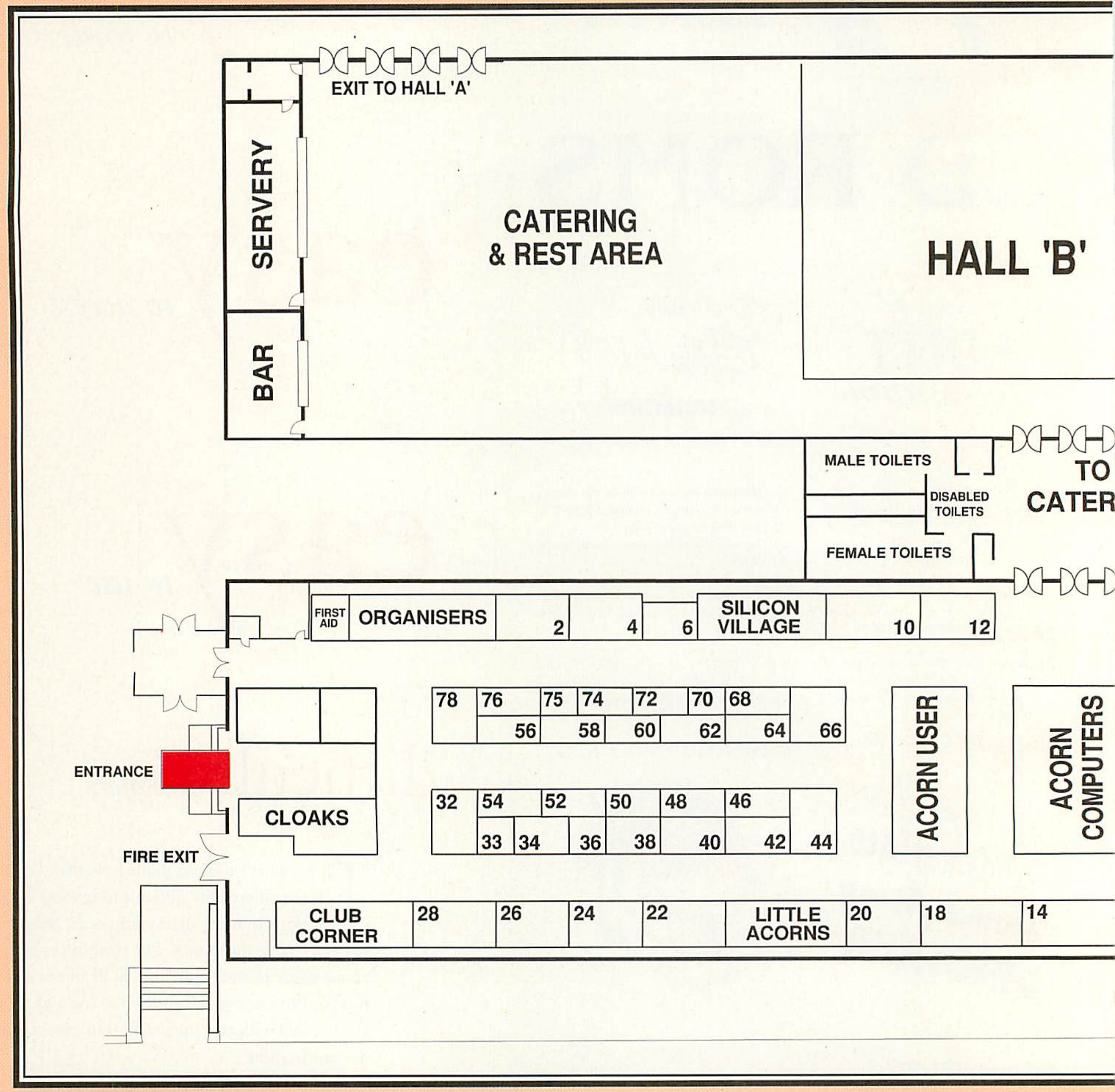
Getting to Harrogate

Rail

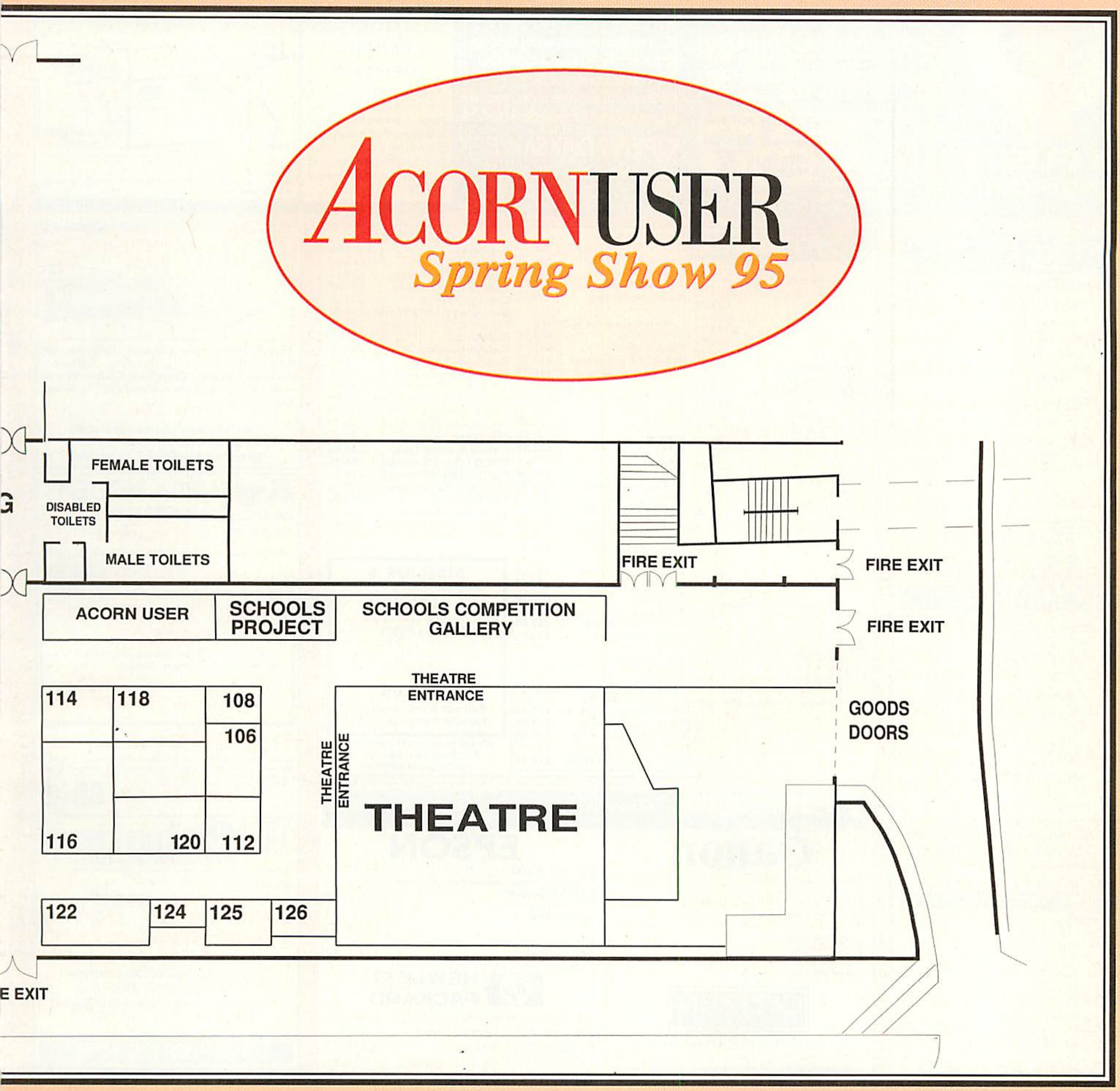
Take the train to Leeds or York and change for Harrogate. The Harrogate International Conference and Exhibition Centre is a few minutes walk from the station.

Road

Harrogate is close to the A1, and is roughly a 20-minute drive from Leeds or York.



List of Exhibitors



Disclaimer
While all reasonable efforts have been made to present the show as advertised, the organisers reserve the right to alter or amend the format if necessary. The organisers accept no responsibility for damage to or loss of property brought into the exhibitors by visitors, for any reason.

Prohibitions
The organisers reserve the right to refuse admission to any person without reason, and also to the expulsion of any person or persons whose conduct is, in the opinion of the organisers, deemed to be contrary to the public interest.

Organisers
The organisers of the Acorn Spring Show 1995 are: Safesell Exhibitions Ltd, Market House, Cross Road, Tadworth, Surrey KT20 5SR, Tel: (01737) 814084, Fax: (01737) 814085. The Organisers' Office is situated on the left-hand side, at the entrance to the hall.

Late Night Opening Wednesday & Thursday Until 7:30

Open Sunday 11 to 4pm

FIRST COMPUTER CENTRE

HOW TO ORDER

Order by telephone quoting your credit card number. If paying by cheque please make payable to: "FIRST COMPUTER CENTRE" In any correspondence please quote a phone number, post code & Dept. Allow 5 working days cheque clearance

SHOWROOM ADDRESS: DEPT.ACU, UNIT3, ARMLEY PARK COURT, STANNINGLEY RD, LEEDS, LS12 2AE.

#1% surcharge on Amex

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- Software standard delivery £1.66
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- Next Week Day £4.21

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- Low Interest Finance now available (subject to status)

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NEW! BBS Modem sales & technical line Tel 0113 231 1422

AUTHORISED REPAIR CENTRE

We offer a FREE quotation on your Acorn or any peripheral (monitors, printers etc). A delivery tariff of just £5.00 is charged or alternatively you can visit our showroom. We can also arrange a courier pickup at an additional cost of £11.00.

EASY ACCESS FROM M62, M1 and the A1



From the M1 follow signs for the M621. Take A643 Elland Rd turnoff from M621. Follow signs for A58. This merges with Armley gyratory.

From the A1 take the turnoff for the A64. This merges with the A58 (by-passing Leeds town centre) which meets the Armley gyratory.

** Risc PC **

Includes Free 12 Months On-Site Maintenance

Prices Listed are for Cash, Cheque or Credit Card#

PC600 2Mb HD210 (complete with Acorn AKF60 monitor)	£1199.00
PC600 5Mb HD210 (complete with Acorn AKF60 monitor)	£1294.00
PC600 5Mb with CD Drive (complete with Acorn AKF60 monitor)	£1502.00
PC600 9Mb HD420 (complete with Acorn AKF60 monitor)	£1594.00
PC600 9Mb with CD Drive (complete with Acorn AKF60 monitor)	£1802.00
With 17" AKF85 add	£400.00
Extra Slice	£99.00
PC Card 486sx (When ordered with a RiscPC)	£99.00

PC-Card Come & See it in action

ARCHIMEDES

A3010 Action Pack (Includes Start Write (Wordprocessor) & Zool)	£249.00
A3010 Early Years	£330.00
A3010 E/Yrs & AKF52	£493.00
A3010 Learning Curve	£330.00
A3010 L/C & AKF52	£493.00
A3020 FD (complete with Acorn AKF52 monitor)	£685.00
A3020HD80 (complete with Acorn AKF52 monitor)	£825.00
A4000 HD210 (complete with Acorn AKF52 monitor)	£865.00

FREE Cumana Oscar CD Drive when you purchase A4000

12 Months On-Site Maintenance £25.49

SOFTWARE PACKS

Early Years (Pack contains Start Write (Wordprocessing), Talking Stories Doris the Dotty Dog, A Mouse in Holland, Explore with Flossy Frog & Paint Pot)	£42.00
Learning Curve Pack (Acorn Advance, PC Emulator & Dr-Dos)	£42.00
Home Office Pack (Easiwriter, DataPower, Pipedream 4, PC Emulator & Dr-Dos)	£85.00
Pocketbook II 256	£222.00
Pocketbook II 512K	£272.00

We Operate Acorn Assist

0% finance available

(Teachers / Lecturers or Concerned Parents)

MEMORY

RiscPC 2Mb	£68.00
RiscPC 4Mb	£112.00
RiscPC 8Mb	£226.00
RiscPC 16Mb	£351.00
RiscPc VRAM 2Mb	£159.00
With 1Mb Vram Traded in	£119.00
A3000 1Mb to 2Mb	£56.00
A3010 1Mb to 2Mb	£44.40
A3010 2Mb to 4Mb	105.00
A3020/A4000 to 4Mb	£85.50
A5000 2Mb to 4Mb	£85.50

CD-ROM DRIVES

RiscPC - Internal

CAA300ia(IDE) with Audio Mixer & Artisan 2 CD	£242.00
300i to 300ia Upgrade	£60.00
Cumana Indigo CAA401 (SCSI)	£194.00
Cumana Indigo CAA631 (SCSI, Caddy Load)	£292.00

All Acorn Machines - External

Cumana Oscar (Parallel)	£223.00
Cumana Bravo (Parallel or SLCD)	£292.00

Please specify machine when ordering (Add £50.00 for ProArtisan 2 CD)

MISCELLANEOUS

MIDI Max (RiscPC & A5000)	£68.00
MIDI /User (A30x0 & A4000)	£49.00
MIDI Cables (x2)	£5.11
RiscOS 3.1 Upgrade	£74.04
RiscOS 3.1 Upgrade Only - no Manuals	£42.55
Acorn Original Mouse	£29.78

SOFTWARE

Application Software

Arc Comm 2	£46.00
Arc Fax 1.12	£29.79
Arcterm 7	£56.50
Artworks 1.54	£120.83
Fireworkz	£99.00
Hearsay II	£64.50
Home Accounts	£27.00
Impression Style	£74.50
Impression Publisher	£126.00
Nighsky	£61.23
Pendown Plus	£65.50
Pro Artisan 24 (Risc PC Only)	£129.00
Rhapsody 3	£73.50
Rhythm Bed	£36.50
Render Bender 2	£38.00
Serenade	£77.02
Schema 2	£94.00
Talking Pendown	£53.00
Titler	£77.00
TurboDriver BJ/Epson/HP	£40.00
Twain	£17.02
Vox Box	£38.26
Wordz	£75.00

*Please Specify Printer

Educational Software

10/10 Dinosaurs	£16.50
10/10 Driving Test	£16.50
10/10 Early Essentials	£16.50
10/10 English	£16.50
10/10 French	£16.50
10/10 Junior Essentials	£16.50
10/10 Maths (Algebra)	£16.50
10/10 Maths (Numbers)	£16.50
10/10 Maths (Statistics)	£16.50
10/10 Spelling	£16.50
Badger Trails	£33.50
Chrystal Rain Forest	£32.77
French Learning Series	£16.60
Noddys Playtime	£16.50
Oxford R/Tree Stage 2	£35.00
Oxford R/Tree More	£35.00
Oxford R/Tree Stage 3	£35.00
Rosie & Jim (Sneezes)	£10.00
Rosie & Jim (Duck)	£10.00

Entertainment Software

Birds of War	£22.70
Black Angel	£22.70
Break 147/Superpool	£22.70
Cannon Fodder	£16.72
Carnage	£16.50
Crystal Maze	£27.83
Cyber Chess	£22.70
Diggers	£20.00
Dune II	£27.50
E-Type 2	£22.97
Elite	£29.78
Flashback	£18.30
FTT Formula 2000	£20.00
Haunted House	£16.50
Lemmings/More (RiscPC)	£22.81
Magic Pockets	£16.70
Play it Again Sam II or III	£18.68
Premier Manager	£16.20
Sally and Wally	£20.42
Saloon Cars Deluxe	£21.50
Sensible Soccer	£17.50
Scrabble	£19.50
SimCity 2000 (A5000/RiscPC)	£28.00
Simon the Sorcerer	£27.80
Star Fighter 2000	£22.55
The Real McCoy 2,3 or 4	£21.00
Time Machine	£16.50
Virtual Gol	£21.27
Wolfenstein 3D	£22.98

Books

Wimp Program. for All	£12.50
Basic Wimp Prog with Examples disk	£14.50 / £16.50
BBC Basic Manual	£18.50
Beginners Guide to Wimp	£12.50

CD Software

Artworks	£129.00
Artworks Clipart	£18.00
Cars-Maths in Motion	£50.00
Childrens Micropedia	£75.00
Creepy Crawlies	£47.50
Dictionary/Living World	£47.00
Exploring Plant Sciences	£85.00
Goldilocks	£39.00
Grany's Garden	£30.00
Map Skills	£49.00
Hutchinsons Encl	£47.50
Image Warehouse	£45.00
Interactive Periodic Table	£96.00
Intro to Classical Music	£48.00
Inventors & Inventions	£150.00
ITN European Atlas	£144.00
Oxford Reading Tree	£39.00
PDCD 1 (RiscPC comp)	£28.09
PDCD 2 (RiscPC comp)	£25.53
Photobase Landscapes	£47.50
Pro-Artisan 2	£127.00
Space Encyclopedia	£32.00
Understanding the Body	£43.00
World War II Archives	£144.00

SIBELIUS 6

Music Processing System

£134.00

Complete Midi System with Yamaha PSS51 61 Keys Mini Keyboard (100 Voices, 28 Note Polyphonic), Ideal for Composition

Midi Max & Midi Cables

£367.00

Full size music keyboard Yamaha PSR83 add £30.00

We also stock a very large range of PC CDs which can be run on machines with a PC Card

PRINTERS

All our printers come with ribbon/toner, paper & cables!!

Canon

NEW! Canon BJ30 (Please phone for details)	£246.80
NEW! Canon BJC70 Colour (Please phone for details)	£302.13
NEW! Canon BJ200ex (3 page/min speed, 720x360 DPI)	£212.76
Canon BJC4000 Colour	£270.64
NEW! Canon BJC600e Colour (New colour bubble jet from Canon)	£365.96

CITIZEN COMPUTER PRINTERS

Citizen printers have a 2 year guarantee

ABC Colour printer (simple (as easy as ABC) to use 24 pin printer. Comes as standard with 50 sheet Auto sheet feeder. Tractor feed optional at £27.99 only £134.99 if bought without the colour option)	£131.91
NEW! Projet II Colour (new inkjet printer with built in auto sheet feeder)	£229.78
Swift Auto Sheet feeder	£68.08
Printer Stands (Universal)	only £4.25

LASER PRINTERS

Panasonic KXP4400	£302.13
Oki 400ex	£306.38

Both are 4 P/P/M, 300 dpi, 1mb memory with 1 year on site.

Turbo Driver for Canon / HP / Epson Please Specify £39.00 with printer

EPSON

Epson LX300 (Parallel/Serial interface as standard, Colour upgradeable.)	£110.64
LQ150 Colour (24 Pin Draft 216cps, LQ79cps)	£178.72
Stylus 800 + (48 Nozzle inkjet 360 x 360 dpi (max) 100 sheet feeder)	£204.26
Stylus Colour (Colour Inkjet, 360 x 360 dpi, 720 x 720 (on special paper))	£365.96

HEWLETT PACKARD

HP 320 portable	£200.00
HP 320 Auto sheet feeder	£59.58
NEW! HP540 mono	£229.79
HP 320/540 Colour upgrade	£31.48
NEW! HP 660 Colour	£371.06

even faster than the HP550C!! All HP printers come with a 3 year warranty

The Star COMPUTER PRINTERS

Star LC90 9 pin mono	£90.21
Star LC100 Colour	£106.38
Star LC240 24 pin mono	£107.23
Star LC240C 24 pin Colour	£123.40
Star SJ144 Colour	£204.26

Stunning affordable colour printer. 3 PPM, low running cost

HARD DRIVES

A300/A400/A5000 3.5" Drives

IDE Card (A300/A400)	£69.00
260Mb 3.5"	£112.00
340Mb 3.5"	£124.00
420Mb 3.5"	£138.00
540Mb 3.5"	£153.00
A5000 Requires 2nd HD Kit	£17.00

2.5" Internal *Inc Interface

SIZE	A3020	*A3000	*A3010
60Mb	£84.26	£143.26	£143.26
80Mb	£93.61	£152.61	£152.61
127Mb	£127.65	£186.65	£186.65
260Mb	£174.46	£233.46	£233.46
520Mb	£357.44	£416.44	£416.44

Easy Install IDE Card (For 2.5"HD) for A3000 or A3010 Available seperately £65.00

PRINTER CONSUMABLES

RIBBONS

Citizen Swift mono ribbon	£4.25
Citizen Swift Colour ribbon	£11.91
Star LC100 mono	£3.14
Star LC200 mono	£4.25
Star LC100 colour	£6.80
Star LC200 colour	£11.00
Star LC24-30 mono	£7.65
Star LC24-30/200 Colour	£10.20
Re-Ink Spray for mono ribbons	£10.20

COVERS

Star LC10/20 cover	£4.25
Citizen Swift/ABC	£5.10
HP500/550/510	£5.10
Star LC24-300/30/100/200	£5.10

PAPER (fanfold or single sheet) prices apply only when ordered with printer or purchased direct from the showroom

1000 sheets £7.65 2000 sheets £15.31

Delivery for 2000 sheets £4.26 when purchased without printer

PREMIER Ink Refills

save a fortune in running costs with your ink/bubble jet. Compatible with HP, Canon, Star, Citizen & many others.

single refills (22ml)	£5.95
Twin refills (44ml)	£11.06
Three colour kit (66ml)	£17.00
Full colour kit (88ml)	£23.82
Bulk refills (125ml)	£21.27

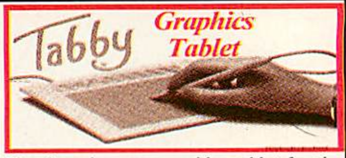
Cartridges

Canon BJ10 cartridge	£16.16
Double life 500 cartridges	£23.82
HP550/500 Colour cartridge	£23.82
Star SJ48 cartridge	£16.16
Star SJ144 cartridge (pack of 3)	£36.59
Star SJ144 mono or colour (3 pack)	£14.46

Miscellaneous

Printer Switch Box 2 way	£11.06
Printer Switch Box 3 way	£17.00
3 Metre printer cable	£5.95
5 Metre printer cable	£7.65
10 metre printer cable	£11.06
Dust Cover A3000/A3010 Keyboard	£45.10
Dust Cover RiscPC	£11.91
Dust Cover AKF12/17/30/40	£5.95
10 Capacity Disk Box	£0.84
50 Capacity Disk Box	£3.40
100 Capacity Disk Box	£4.67

Tabby Graphics Tablet



The Amazing new graphics tablet for the Acorn Range of computers, Software developed by First Computer Centre. Works with all major software. Rated 100% in Amiga Computing. Only £68.08

Special Bulk prices for Educational Establishments

Works on A3000 Series onwards Requires RiscOs 3.1 or above.

SUPRA MODEMS

Supra come with comms s/w & cables

SupraFAXModem 288

NEW Super fast! V34, 28,800 bps + 14,400 Fax

only £163.40 (90% AMIGA COMPUTING)

SupraFAXModem 144LC

Features as below but class 1 fax only & without alpha numeric display. "Performs perfectly, never missing a connection" ..Computer Shopper April 94

now only £78.30

SupraFAXModem V.32bis

14400 baud, V.32bis/32/22bis/V22/V2/MNP2-5/V.42/V42bis, Class 1 & 2 commands, 9600/14400 Group 3 Fax. Includes free comms (not Fax)s/w & cable. "Excellent performance, this modem should be on everyones shortlist" ..Computer Shopper April 94

only £131.91 (93%)

USRobotics

WE ARE PREFERRED USR DEALERS

Sportster 288 + FAX V34, 28800 BPS now only £199.15

Sportster 14400 FAX Only £134.46

Courier /Dual Standard V.34 only £279.15 (Limited offer)

PLEASE CALL FOR DETAILS ON NEW SPORTSTER VOICE MODEMS!

Come with a 5 year warranty & are BABT Approved

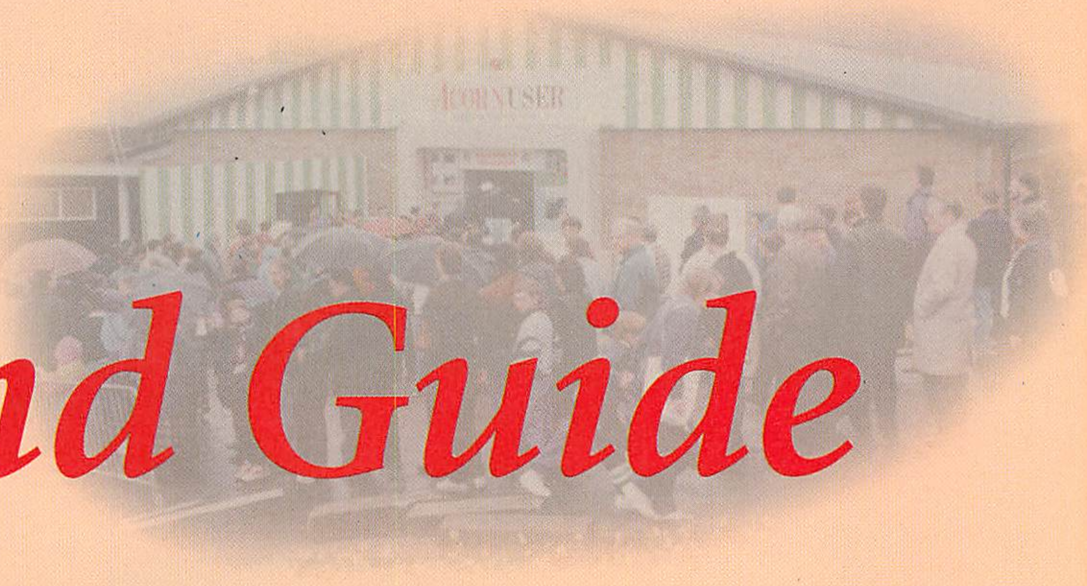
Acorn Modem Cable £8.50

3.5" DISKS

QTY	Bulk DD without labels	Bulk HD without labels
10	£3.82	£5.10
50	£17.86	£19.57
100	£32.33	£36.59
500	£143.82	£161.22

Labels available - 50@£0.85 100@£1.70 500@£5.95 1000@£8.50

QTY	Branded DD with labels	Branded HD with labels
10	£4.67	£6.80
50	£19.57	£25.52
100	£36.59	£45.10
500	£162.54	£170.20



Stand Guide

Acorn Computers Ltd
Stand: Centre
Acorn Computers will be showing the range of RISC-based computers, from a child's start in the world of computing with the Early Years package, to the fabled Risc PC-based 'rocketships'. See the latest enhancements to the phenomenally successful Risc PC in the worlds of video processing and editing, and music generation. See how the latest developments in networking enable Acorn to communicate across platforms and to the whole world via the Internet. Look into the future and see how some of the latest technologies are being developed in the Risc PC.

Visitors to the stand will receive a special incentive to participate in the exploration of these technologies by joining the Acorn Clan.

Acorn User Magazine
Stand: Centre
Come and meet the magazine team. We'll be showing off our cover CD-ROM and how we put it together, as well as describing how we can produce magazines using Acorn equipment. And if you've got any questions or queries, drop in and ask our technical team. You can buy the latest issue of the magazine – hot off the press – and can take out a subscription on the stand. See you there.

8-Bit Software
Stand: Club Corner
8-Bit Software is a postal user group and Public Domain library supporting the BBC and Master computers, and is centred around a regular disc-based magazine which is always packed with new articles and software submitted by the members. Membership of the group is free.

The PD library is very large and contains items recently released by commercial software houses. Prices are minimal at only 50p per disc if you supply a disc and postage.

Come and see us in Club Corner and pick up the latest magazine disc and catalogue disc at the special price of £1.50.

Akalat Publishing
Stand: 50
Akalat Publishing is home to the magazine *Acorn Publisher*, launched last year to cater for all those with an interest in desktop publishing, design and graphics, including electronic publishing and multimedia. Issue four of this burgeoning magazine will be on sale at the Show together with all back issues. Come and find out for yourself why *Acorn Publisher* is generating so much positive interest in the Acorn world.

We also hope to have the first *Acorn Publisher's Toolkit* available, containing a variety of useful applications to help those involved in desktop publishing, and we will be offering free help and advice on all matters to do with desktop publishing – don't miss us!

Alsystems
Stand: 34
Following the huge interest in the Power-Tec range of SCSI and IDE products at CeBIT in Hanover, visitors to the Acorn User Show will be among the first to be able to purchase the new SCSI-2 card in the UK. Searing performance combined with ease of use are the main features of the Power-Tec range which now includes IDE, 8-bit and 16-bit SCSI together with SCSI-2.

Special offers on hard discs together with some exciting CD-ROM deals will be available for the whole Acorn range. Photo CD clip art, software and the full range of Acorn computers will be available to purchase from the stand.

Alternative Publishing
Stand: 70
Alternative Publishing will be demonstrating its popular import software, *ImageFS*, which allows users to import graphics from PC, Macintosh, Amiga, Atari and Unix computers straight into any RISC OS application.

Also being demonstrated for the first time will be the revolutionary new product *Universal Image* which will allow users to both import (incorporating all the features of *ImageFS*) and export images from Acorn systems to other platforms (Windows BMP, TIFF, Apple PICT etc.). *Universal Image* will also allow pop-up previews of images before they are loaded, management of image libraries through contact sheets, extended file support and other features.If you deal with lots of graphic images from different computer systems – like we do at the *Acorn User* office – check out these two products. Alternative Publishing will also take enquiries regarding its bureau and print services for Acorn systems.

Anglia Multimedia
Stand: 40
Anglia Multimedia, part of Anglia Television Ltd, presents its full range of CD-ROMs, featuring full screen video, including the latest releases: *Understanding Energy*, *The World's Weather*, *Art Store: Looking at Animals*, *The Industrial Revolution*, *Britain from the Air*, and *Garden Wildlife*.

Key Plus 3.0, Anglia's data management system with its enhanced world mapping system, the latest *Key Plus* datafiles – many now available on CD-ROM – *Key Author 2.0*, the multimedia presentation package, *Key Calc* and *Key Count* spreadsheets will also be available to view.

Apricote Studios
Stand: 54
Apricote Studios will be launching *Prophet* version 2 at the Show. There is an endless list of new features, and upgrade packs will be available for existing users at £35.25 inc. The very popular *Personal Accounts* will also be on demonstration as will *Shares 4* with teletext links to Design IT/Computer Concepts teletext card. If you are interested in personal, club or business accounting, then Apricote Studios' stand is a must!

Archimedes World
Stand: 98
Head for the *Archimedes World* stand for advice and assistance on any aspect of using your

Acorn computer. While you are there, why not take out a subscription so you can always be up to date on what's going on in the Acorn world? As well as being packed full of news, reviews and informative articles, there is also the famous cover disc to keep you busy until the next issue is published.

Beebug Ltd
Stand: 10

Beebug is Acorn's largest consumer dealer, offering the highest level of support and advice. We will have special Show package deals on software and computers and will be demonstrating loads of new products including *Ovation Plus*, the last word in desktop publishing with many features completely new to the Acorn platform, and a fully internal datafax modem on a standard half-width podule operating up to speeds of 19,200 bps (V32 turbo). See our recently launched range of tape streamers and, available for the first time, our new range of low-cost, high performance Ethernet cards for the full Acorn range. Networking experts will offer advice.

RISC User magazine (now in its ninth year), is the number one subscription magazine dedicated to Acorn's RISC computers, with its mix of news, features, reviews, hints and tips. You get *free* software with every new subscription – visit our stand and subscribe. Our new *PC Survival Guide* book will also be available.

Castle Technology
Stand: 56

Castle Technology will be showing a huge range of products including the Ergo Keyboard, an alternative keyboard for your Acorn computer, and Scanflat, a flatbed SCSI scanner up to 600dpi, capturing 16.78 million colours. This is together with CD-ROM drives for multimedia and breathtaking graphics, hard disc upgrade kits, our unique light pen to replace the mouse and the SCSI disc share for up to six Acorn computers to share a hard disc and CD-ROM providing a fast and easy-to-use 'mini network'. The Risc PC will be available at special prices – please enquire for further details.

Clares Micro Supplies
Stand: 114

This year's *Acorn User* Show will see the official launch of the long awaited *Composition*, the powerful image layout and creation package written exclusively for the Acorn Risc PC. *Compo*, as it is commonly known, is a sophisticated design tool which allows the combination of 24-bit images from any source, and allows effects such as drop shadowing and transparency masks to be applied with ease.

Also due for release at the Show is the primary package *Celebration*, which consists of four applications for creating printed outputs on a celebration theme: *Banners*, *Calendars*, *Certificates* and *Giftwrap*. As well as the Risc PC-specific products, Clares will also be showing its latest software releases that run across the entire range of Acorn RISC OS machines. There will be special Show discounts for *all* Clares' products.

Computer Concepts Ltd
Stand: 116

Computer Concepts and Wild Vision will be demonstrating and selling their market-leading and extremely popular ranges of publishing and multimedia related products including an exciting new range of printers from Canon, *Movie Magic in a Window*, and developments for the PC card.

Cumana
Stand: 125

Cumana will be showing its full range of CD-ROM, multimedia and networking products, including the Cumana NEXUS Primary Disc Sharer. See the current range of Cumana CD-ROM drives, along with several new products including quad-speed drives and the dual media PD drive from Panasonic.

The NEXUS ATM network on the stand will be using a range of network services including Teletext and access to the Internet. CD-ROM software will be distributed to the stand machines from a Cumana multi-drive tower, controlled by Cumana's newly launched *CD-Net 2* networking software. Our new tape backup software will also be close at hand!

Dalriada Data Technology
Stand: 36

Dalriada will be demonstrating the latest versions of its popular publishing utilities, and giving a good hint of future developments. The *Acorn User* Spring Show sees the launch of *TableMate*'s latest version, your first opportunity to see the recently released *DiagramIt* in public –named by readers of *Acorn User* magazine – and a preview of our next release... with special Show offers, a visit to this stand can only be a must for anyone with an interest in DTP.

DEC_dATA
Stand: 72

DEC_dATA, the home of clip art, has three new products on show for the first time at the *Acorn User* Show. The *Primary Teacher's Clip Art Starter Set* is designed for cross curricular work at Key Stage 2. *World War One: The Western Front* is the second collection of clip art from DEC_dATA that includes a fully working *ClearView* multi-media file, while *DRAW_Changer v2* now features 15- and 24-bit sprites from *Draw* files and a new low price. The new DEC_dATA brochure listing the above products and many others will be available at the stand.

Desktop Projects
Stand: 120

In addition to its successful range of *TopicArt* clip art and its *Quick* series utility software, Desktop Projects will also be supplying the Risc PC range of computers, Risc PC memory, low-cost SCSI CD-ROM drives and IDE hard drives at very attractive prices.

Eesox
Stand: 68

Eesox's product range is continually expanding. In 1992 we released our first products for CD-ROM developers. In 1993 we were the first to release a range of professional pressure-sensitive graphics tablets. Late 1994 saw us selling affordable, quality CD-ROM drives. This year will be our first at *Acorn User*, and we'll be selling more for less, with faster CD-ROM drives and higher specification graphics tablets. We've also had the honour of mastering the first *Acorn User* cover CD-ROM, a service that anyone can use for only £60. Eesox has products for existing CD-ROM drive owners, namely *CDFast* and *NetCDFast*, designed to speed up any CD-ROM program. Photo CD users will appreciate *CDFast* as it can reduce by a third the normal 14 minute time-to-make-a-cup-of-tea wait for a picture to load.

Fabis Computing
Stand: 62/64

The ultimate DTP stand...

EasyFont3: This font management system gives you total control over your fonts. Its unique and innovative WYSIWYG font display allows fast and easy selection of fonts. If you use fonts, you need this.

PublishArt release 2: This Smart DTP product comes with over 1500 designs and a comprehensive manual so you get the best from your design work – a must for anyone in DTP.

Fonts: Two packs from iSV with over 35 typefaces and an incredible 277 weights and styles in each pack. All fully kerned and scaffolded to give quality fonts at a price that suits every pocket.

GamesWare
Stand: 66

Showing for the first time will be the CD-ROM version of *Simon the Sorcerer*. This features over 300Mb of sampled speech, including that of Chris Barrie (of *Red Dwarf* and *Brittas Empire* fame) playing Simon. *Simon the Sorcerer* on CD-ROM takes Acorn games into another dimension of realism. Also new for the Show will be *Taurus*, the new compilation pack in the *Zodiac* range, and the GamesStick, a six button joystick. See the rest of the ever growing GamesWare range including *Aries*, *Wavelength*, *Simon the Sorcerer*, GamesPads and PowerSwitch.

HCCS Associates Ltd
Stand: 126

HCCS will be showing several new products at the Spring Show, including enhanced IDE interfaces, quad speed CD-ROM drives, 16-bit sound cards and an important new development for Vision 24 users.

Icon Technology Ltd
Stand: 106

Icon Technology has been developing state-of-the-art word processors for over ten years. Its products have been used by Douglas Adams to write and typeset *Dirk Gently's Holistic Detective Agency* and by the script writers of *Tomorrow's World* and *Red Dwarf*. Icon also produces technical word processors – users include the Royal Society and Stephen Hawkins' group in Cambridge.

At the Show, Icon will be showing *TalkWrite* – an entry level word processor that can speak, *EasiWriter* – a multi-column word processor that features automatic table creation and multi-lingual spell checking, and *TechWriter* – a technical word processor that lets you type mathematical expressions in directly iwithout having to use a separate application.

Integrex Systems Ltd
Stand: 122
Integrex will show the latest from its range of colour ink jet printers launched in January 1995, including the Colourjet Master offering the finest quality in text and graphics. With its robustly-constructed integral 150-sheet feeder, little matches it at under £250 (plus VAT). Even easier on the pocket is the Colourjet Classic, giving 600x300 dpi resolution and offering roll-fed paper as standard, ideal for banner printing, with options to feed A4 cut sheet.

Look for the value bundle at £249 (plus VAT) which includes the *Banner* software package worth £50. Also on sale, at very competitive prices, are all the new printer designs from Hewlett Packard including the Deskjet 540 and many more. There will also be market leading colour products from Canon, including the BJC-600, BJC-400 and many, many more.

Iota Software
Stand: 112
At this year's Show Iota Software is featuring its innovative new package *The Complete Animator*. Two years in design and development, *The Complete Animator* is an all-round, easy-to-use animation package that is suitable for all ages. You can use it to create all forms of animation from fun cartoons to colourful moving diagrams or animated presentations as part of a multimedia project. Also being demonstrated is the high performance colour scanner which is available at a very competitive price. Other Iota favourites such as *DataPower*, *Junior Database* and *TouchType* are also on show. Visit the Iota stand and look out for some very special Show offers!

Irlam Instruments Ltd
Stand: 20
Irlam Instruments specialises in imaging products, including flat bed scanners and multimedia capture systems. New products on show will be a low-cost 16-bit sound sampler and television tuner (including teletext and NICAM). Video digitisers will include the 24i16, a combined 24-bit video and 16-bit audio card, and a preview of a high-performance video capture and compression system. This has been designed to take advantage of all the new features of Risc PC's expansion bus including 32-bit transfers and DMA. As always, the most complete range of colour scanners will be demonstrated, from low-cost hand-held units right up to professional A4 flat beds with transparency adaptors.

ImageBank will be on sale at a special Show price with more special offers to be announced.

Krisalis Software Ltd
Stand: 118
Krisalis looks forward to welcoming friends old and new. As usual, the stand will be filled to bursting point with offers and bargains unique to the *Acorn User* Spring Show.

Krisalis' Technical Director, Shaun Hollingworth, will also be on hand to answer any queries you may have. We look forward to seeing you.

Lindis International
Stand: 12
An Acorn education and network dealer in the UK and overseas, Lindis also produces: *CableNews II*, a powerful multimedia package used for creating visually powerful interactive presentations; *Presenter GTi 16v*, the original and still the best graphing package for RISC OS, progressively developed to meet its users' demands; *CadMust*, a professional CAD package for commercial design of PCBs and circuits; *CadMust Project* which brings the full capacity of *CadMust* to a price that's affordable by schools; *Buttons*, a simple application launcher combined with effective hard drive protection for use in primary and special needs schools; and the *Anglia Heritage* CD-ROM, which describes the history, geography and culture of Norfolk and Suffolk.

Longman Logotron
Stand: 18
At this year's *Acorn User* Spring Show Longman Logotron will be able to offer something for everyone, from word processing and DTP to spreadsheets, multimedia and image processing.

Brand new software titles include, for the very young, *Rainbow*, a picture-based multimedia program, and *PicturePoint*, which incorporates talking graphs. For those looking for CD-ROMs, new additions for the *Photobase Decades* series will extend your collection of high quality images from the famous Hulton Deutsch photo library.

We will also be offering a 20 per cent discount on any software bought from us at the Show.

Magnetic Image
Stand: 74
Magnetic Image brings a welcome first to the Show with its innovative analogue joystick interface, Flight Max. It plugs into the printer port and allows one, or with a splitter, two joysticks to drive Acorn games.

As well as demonstrating the extensive key and mouse emulation of Flight Max, Magnetic Image will be showing just some of the huge range of 15-pin analogue joysticks and flight yokes that the Flight Max will work with. Also on show will be *Elite* and *Starfighter 3000* running with Flight Max. At last, no more fighting with the mouse!

Minerva Software
Stand: 58
Experience new low prices from Minerva! Many of Minerva's popular titles have been reduced in price, and with extra offers at the Show, represent incredible bargains. New for 1995 and the Spring show are *PrimeMover*, the only real time animation program; *PrimeStories*, multimedia for the terrified, ideal for creating your own talking stories; and last but by no means least, the long awaited *Ancestry II*. Whatever you are looking for in software, home, educational, new releases or just a bargain, the Minerva stand is the place to be.

Northwest SEMERC
Stand: 75
New to the *Acorn User* Spring Show is SEMERC's Roller Joystick, designed to provide learners with an easy method of moving the pointer, as well as icons and graphics, around the computer screen using a lockable 'drag' facility. Also on show is *Dazzle*, SEMERC's latest art package, suitable for nursery pupils through to Key Stage 3. Highly versatile, it offers access to simple colours and shapes or the most sophisticated spray and wash tools. Also featured will be *Ultima*, a powerful package for linking words, pictures and sounds to create talking books, stories and animated sequences.

Oak Solutions Ltd
Stand: 32
Some of the many programs Oak will be showing will be *VersaTile*, a very easy-to-use and flexible program that encourages investigation of tilings and patterns – suitable for geometers and potential designers of all ages; the latest version of *Design Processor*, a fully integrated design environment developed for use with the Design and Technology curriculum, combining masses of data with site licences for a wide range of CAD tools; *Apollonius*, a revolutionary parametric CAD program that combines Olympian power with Spartan simplicity, so you can create designs that can be manipulated using a minimal interface that is very easy to learn and use; and finally *Genesis*, multimedia authoring made easy. It is important for learners to be able to create their own interactive applications, and the best-selling *Genesis* empowers students to participate in their education using drawings, sound and animations.

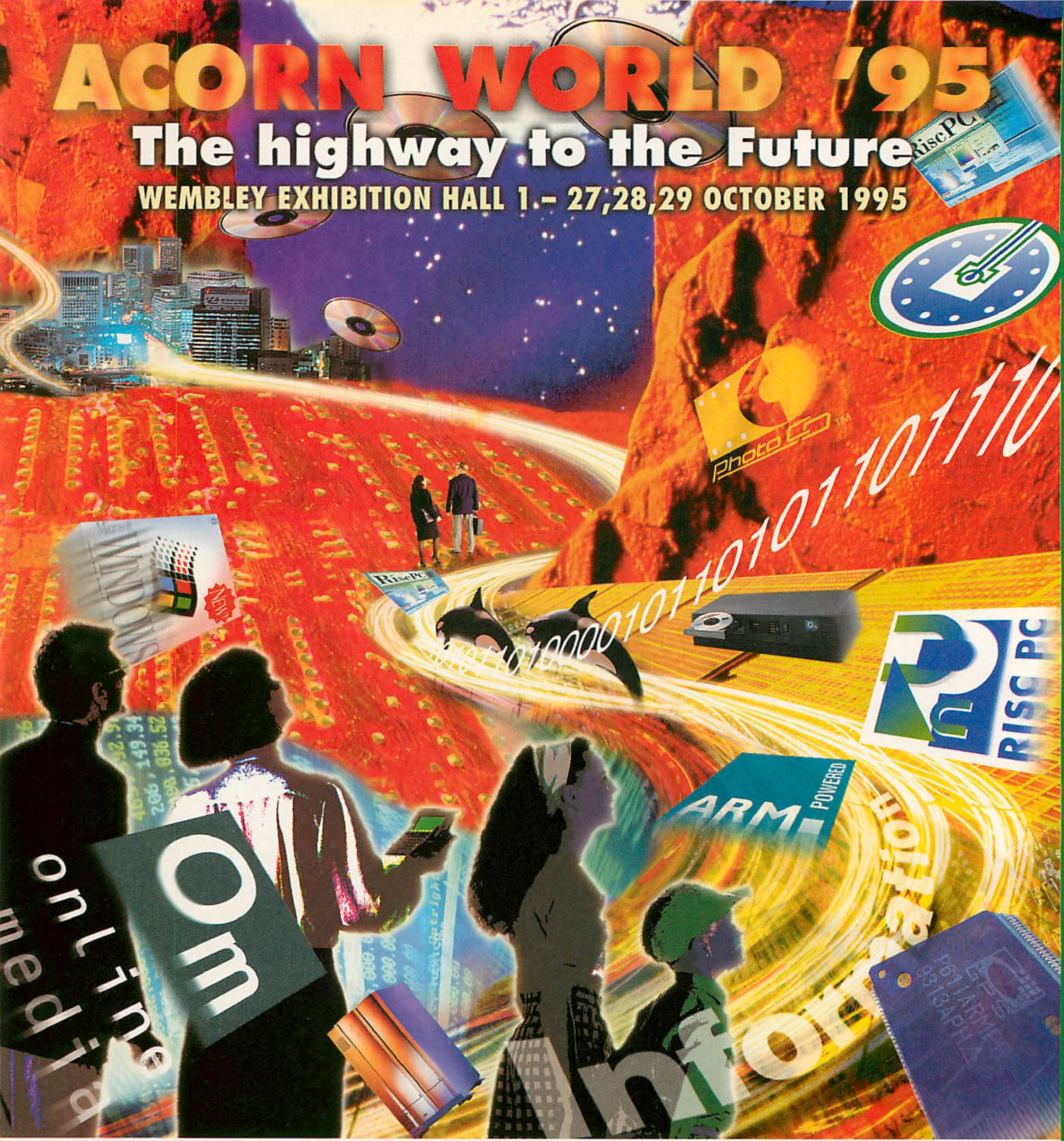
Oregan
Stand: 46/48
Oregan is presenting *CineWorks*, a new 32-track video mixing studio designed to manipulate MPEG and Replay clips, while providing separate control over 16-bit audio tracks. *CineWorks* can perform impressive fades and transformations between clips, as well as allowing zooming, panning, rotation, shadowing, ghosting and masking of the film. Dynamic visual correction of colour, brightness and contrast throughout each clip, together with advanced genlocking facilities, brings professionalism to your work.

The package is supplied with a *free* CD-ROM containing a wealth of interesting video and audio clips to get users started. However, *CineWorks* will be invaluable to owners of video capture cards such as the Eagle M2 or Irlam card, who will now be able to take the role of cameraman, director and producer of their own productions.

Quill Marketing
Stand: 108
Quill Marketing will be showing a range of computer security products, textile transfer papers and ink-jet refills.

Sherston Software Ltd
Stand: 42 & Little Acorns
Leading educational software specialists, Sherston Software, will be launching *Plantwise* at *Acorn User* '95, a fascinating animated database of plant life.

An inspiring collection of new releases will be on demonstration including the innovative *All New Talking Animated Alphabet*. This unique package incorporates digitised human speech and morphing graphics in three



Log on, hook up or plug into the Information Superhighway. Whichever way you want to enter this new world, Acorn World '95 promises to be the best event of the year. Come and get real, hands-on experience of all the latest desktop products. Learn from the experts at the live theatre presentations. See the revolution in home services being created by Acorn's "Set-Top Box" technology. Plus jugglers, face painting, a games arcade, competitions with prizes. A FREE créche and over 100 exhibitors showing what's new and exciting in the world of IT.

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games that deal with visual and aural letter discrimination and letter recognition.

In addition to its conventional stand, Sherston will be exhibiting an exciting range of titles on the Little Acorns stand; these titles will include the first talking activity programs based on Central's popular TV programme, *Rosie and Jim*.

Sibelius Software
Stand: 76

Sibelius will be demonstrating its new *Sibelius 7 version 2.5*, the expert music processing system used by the Royal Academy of Music, the Royal College of Music and the BBC. This is the ultimate MIDI-compatible music processor, essential for A-level and university music students and for anyone else who wants to produce music on paper.

Also on show will be *Sibelius 6*, an inexpensive version suitable for schools up to GCSE level. 'I never thought I would abandon pen and ink, but *Sibelius 7*'s quality, speed and ease of use has completely won me over.' (John Rutter, composer)

Silicon Village
Stand: 8

Learn to ride the surf and make waves on the Internet! Chat to Silicon Village's surfers and lifeguards and see demonstrations of different aspects of Internet access and the software available, including Doggysoft's brand new *Termite Internet* with World Wide Web graphical hypertext browser. Browse the Cyber Beach and Acorn interactive magazines on local terminals, play the *Avatar* multi-user game and check out the many other features of Silicon Village. There's a daily prize draw to win a free three month account, too.

SkillsWare
Stand: 66 & Little Acorns

SkillsWare will be showing its increasing range of entertaining educational products and launching *The James Pond* educational pack. Produced in conjunction with Thames Water, it features two educational pieces of software. The first is based around the arcade game of *James Pond*, where you have to guide the character through the water process from source to tap. The second, *Running Water*, is a simulation of actually running the new Thames Water Ring Main. Both demonstrate how games can successfully be used in an educational context. *Playdays*, based on the popular BBC TV series of the same name, will also been shown, and includes 13 different educational games, encouraging the development of reading, spelling, counting, memory skills and so on.

Softease Ltd
Stand: 72

10 per cent off when you buy *Textease*, the new desktop publisher/word processor, from the Softease stand.

Textease is an easy-to-use package, for any work at home or school involving text and graphics, including letters, leaflets, posters and banners. Posters are printed on any standard A4 printer. *Draw* and sprite files can be dropped anywhere and are easily sized and moved. Schools find its easy learning curve ideal and children enjoy the colourful effects it can produce. Even small businesses with only the occasional DTP jobs such as leaflets and posters will find textease well worth its low price.

Spacetech
Stand: 38

Spacetech will be showing its much acclaimed *Photodesk* working in conjunction with the Primera dye-sublimation printer for truly stunning pictures of photo-realistic quality at a fraction of the price usually expected of such appliances. Given its compatibility with a variety of colour scanners and with Wacom graphics tablets, the total graphics solution can now be obtained – amazing quality for an amazing price!

Also on show will be the Risc PC versions of both *PDSview* and the *Weather Desk*, taking full advantage of the 24-bit colour capability.

10 out of 10
Stand: 78

The ever growing 10 out of 10 Series will be launching *Science and Spelling/Punctuation* for the Show. As with other titles, it will feature assessment and will complement the range voted 'Best educational series' by readers of *Acorn User* magazine.

TBA Software
Stand: 60

After the continued success of *Axis* and *Formula Two Thousand*, TBA is beginning an avalanche of new releases with *The Cobalt Seed*, *Acceptable Rate of Loss* and *Cyber Ape* topping the bill. The ever-popular range of joypads, which includes the stunning Phantom, will also be available priced from as little as £15. There is also an opportunity to see a preview of *TAG 2*, the definitive 24-bit colour, power 3D rendering engine for the Risc PC.

The ARM Club
Stand: Club Corner

The ARM Club is the largest non-profit making independent user group for Archimedes and Risc PC computers. Its primary aim is to provide support for its members in various ways through the quarterly magazine and disc, Help Line services, training courses, local Open Days, PD Library and Club products, such as *GameOn!*

This year will be the club's fifth year in existence and it hopes to be more involved with local area groups.

The Datafile
Stand: 44

The Datafile will have their two very popular public domain CD-ROMs on offer. The two *Gothic and Medieval Font Packs* will be joined by a third selection designed by Tony Nash – a superb Copperplate fonts package supported by a collection of draw format swashes.

As a Show special, all customers have the chance to win back the full cost of their purchase in our cash-back draw. The lucky ticket will be drawn by Mark Moxon, Editor of *Acorn User* magazine.

As always, our complete range of PD and Shareware will be available, plus our £10 Show disc packs.

The Really Good Software Company
Stand: 124

Want to get that video collection under control? Don't miss RGSC's latest release, *VideoTrak*. Undoubtedly the easiest way to set up a fully cross-referenced database that can be accessed, sorted and read by film title, tape, actor, director, rating and category. *NoticeBoard*, the versatile electronic display system, greatly enhanced since its Acorn World debut last year, will be 'on screen' throughout the Show. Already used in schools, *NoticeBoard* is now going into businesses too. Ask about *NoticeBoard for Business*.

Need super disc security? The answer has to be *Softcrete*'s three disc protection options.

Also on show: *Notes*, *Twilight*, *Z-Link II* and *Multi-Link*.

Uniqueway Ltd
Stand: 52

Uniqueway will be launching the second volume of the *RISC Disc* CD-ROM. Also on show will be *Empire*, the Acorn Replay Movie editor, as well as *CDSampler* and *EMConvert*. There will be special offers on SCSI CD-ROM drives and Syquest removable drives, together with high quality multimedia loudspeakers. Uniqueway now also offers a CD-ROM cutting and MPEG encoding service, and will be showing examples of its work.

AVIPlay and *AVIFS* from Warm Silence Software will also be on sale on the stand, to cater for all sorts of movie files from lots of different platforms.

VTi and Eclipse
Stand: 14

VTi will, as always, have a range of special Show offers on all its products. Look (or listen!) out for the Printer Port Sampler (highly rated in recent reviews including *Acorn User*) and the powerful VTX-2000 music card. There will be plenty of hard drive and CD-ROM special offers, and don't forget *Investigator III* and *ArcFS 2*. And why not take a look at the new *HeartBeat* package which will help keep you fit.

On the Eclipse side of the stand will be the first chance to get your hands on *Dune II* at a show, as well as the launch of the new top conversion of *Global Effect*, a world simulation program. As well as these, Eclipse will have many special offers including *James Pond 2*, the PowerPad joypads, *Xenon II* and the *Eclipse Collection*.

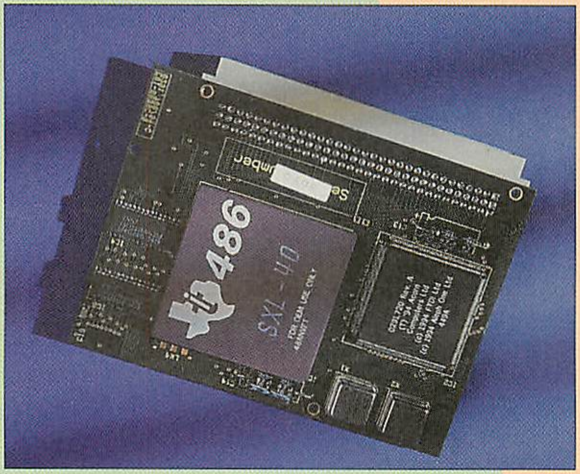
Wakefield Acorn Computer User Group
Stand: Club Corner

Come and visit one of the longest running independent user groups in the country. There will be demonstrations of *RISCCAD*, a professional CAD package written by Dave Buck, a group member. We will also have a number of PD/Shareware discs for sale, plus compilations of hints and tips on disc etc.

Membership is open to everyone: you do not have to live in West Yorkshire to reap the benefits of the user group as we also cater for correspondence members. The cost, just £6 for full or correspondence membership or £10 family membership.

Pick up an information/ membership pack from our stand.

Next Month in ACORN USER



PC Card labs test

We've been testing the Risc PC's 486 card solidly since it was released, and next month we'll bring you the real low-down on what it can and can't do, and how it works. If you're thinking of buying a PC card, don't until you've read the opinion that matters.

DTP in practice

We visit TJ Reproductions, the premier Acorn-based repro house in the country. Be warned – if you get jealous of other people's systems, be prepared to read about the most incredible Acorn-based system ever assembled.

Mastering your own CD-ROM

Last month we brought you the world's first ever cover mounted Acorn CD-ROM. Next month David Matthewman, *Acorn User*'s disc editor, describes how he compiled the disc, and produced one of the most useful and comprehensive collections of Acorn programs and demos ever seen.

SCSI 2

Is SCSI 2 worth the extra money over the original SCSI cards? Dave Lawrence gets his hands on Cumana's latest addition to the world of SCSI.

To be sure of your copy, please fill in the coupon below and hand it to your newsagent. Or why not take out a subscription, which includes a gift pack. See the Subscribers' Page for details.

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Reader **survey**

At *Acorn User* we're always looking for ways to improve ourselves. If you'd like to help shape the future of the world's favourite Acorn magazine, we'd be most grateful if you could take time out to fill in this survey, or use the program on the cover disc.

1. What sex are you?
   - ❑ Male ❑ Female

2. How old are you?
   - ❑ Under 15 ❑ 15 - 19 ❑ 20 - 24 ❑ 25 - 29
   - ❑ 30 - 34 ❑ 35 - 39 ❑ 40 - 44 ❑ 45 - 49
   - ❑ 50 - 54 ❑ 55+

3. Which of the following best describes you?
   - ❑ Director / Owner ❑ Senior manager
   - ❑ Manager ❑ Clerical
   - ❑ IT specialist ❑ Teacher / Lecturer
   - ❑ Student ❑ Unemployed
   - ❑ 'Homemaker' ❑ Other

4. What is your annual income?
   - ❑ No income ❑ Less than £10,000
   - ❑ £10,000 - £14,999 ❑ £15,000 - £19,999
   - ❑ £20,000 - £29,999 ❑ £30,000 - £39,999
   - ❑ £40,000 - £49,999 ❑ £50,000 or more

5. What type of Acorn computer(s) do you use?
   - ❑ A300 ❑ A400 ❑ A3000 ❑ A3010
   - ❑ A3020 ❑ A4000 ❑ A5000 ❑ A4
   - ❑ A540 ❑ Risc PC ❑ Pocket Book

6. What type of Acorn computer(s) do you own?
   - ❑ A300 ❑ A400 ❑ A3000 ❑ A3010
   - ❑ A3020 ❑ A4000 ❑ A5000 ❑ A4
   - ❑ A540 ❑ Risc PC ❑ Pocket Book

7. What other type(s) of computer(s) do you use?
   - ❑ IBM compatible ❑ Apple Mac ❑ Mainframe
   - ❑ Games console ❑ Amiga ❑ Atari ST/Falcon
   - ❑ Other

8. How do you use your Acorn computer at home?
   - ❑ Programming ❑ Home / Personal ❑ School / Games
   - ❑ Office work ❑ Teaching ❑ Business
   - ❑ Club / Society ❑ Learning computing ❑ College work
   - ❑ Teaching own children at home

9. How much memory is in the Acorn 32-bit machine you use most?
   - ❑ 1Mb ❑ 2Mb ❑ 4Mb
   - ❑ 8Mb ❑ 16Mb ❑ More than 16Mb

10. What operating system does your most-used machine have?
    - ❑ RISC OS 2 ❑ RISC OS 3.00
    - ❑ RISC OS 3.10 ❑ RISC OS 3.50

11. How much hard disc storage do you have in the Acorn 32-bit machine you use most?
    - ❑ None ❑ Up to 19Mb ❑ 20Mb-39Mb
    - ❑ 40Mb-79Mb ❑ 80Mb-119Mb ❑ 120Mb-199Mb
    - ❑ 200Mb-499Mb ❑ 500Mb or over

12. How long have you been using your Acorn 32-bit computer?
    - ❑ Less than 6 months ❑ 6 - 12 months
    - ❑ 1 - 2 years ❑ 2 - 3 years
    - ❑ 3 - 4 years ❑ 4 - 5 years
    - ❑ 5 - 6 years ❑ Longer than 6 years

13. Which of the following types of hardware add-on do you own?
    - ❑ More memory ❑ Hard disc drive
    - ❑ Monitor ❑ Expansion system
    - ❑ ARM3 chip ❑ Floating point chip
    - ❑ High density floppy drive ❑ Printer
    - ❑ Scanner ❑ Video Digitiser
    - ❑ Full Motion Video ❑ CD-ROM system
    - ❑ Modem ❑ Fax-modem
    - ❑ Graphics card ❑ PC card (not Risc PC)
    - ❑ PC 486 card (Risc PC) ❑ Network

14. Which of the following types of hardware add-on are you likely to buy in the next 12 months?
    - ❑ More memory ❑ Hard disc drive
    - ❑ Monitor ❑ Expansion system
    - ❑ ARM3 chip ❑ Floating point chip
    - ❑ High density floppy drive ❑ Printer
    - ❑ Scanner ❑ Video Digitiser
    - ❑ Full Motion Video ❑ CD-ROM system
    - ❑ Modem ❑ Fax-modem
    - ❑ Graphics card ❑ PC card (not Risc PC)
    - ❑ PC 486 card (Risc PC) ❑ Network

15. Which of the following types of software do you own?
    - ❑ Word processor ❑ Desktop publishing
    - ❑ Spreadsheet ❑ Home finance
    - ❑ Database ❑ Graphics
    - ❑ Games and leisure ❑ Music / MIDI
    - ❑ Education ❑ Programming related

16. Which of the following types of software are you likely to buy in the next 12 months?
    - ❑ Word processor ❑ Desktop publishing
    - ❑ Spreadsheet ❑ Home finance
    - ❑ Database ❑ Graphics
    - ❑ Games and leisure ❑ Music / MIDI
    - ❑ Education ❑ Programming related

17. If you're thinking of buying a new computer (not a games console) in the next 12 months, which is it most likely to be?

❑ Acorn Risc PC ❑ Other Acorn (desktop machine)
❑ Acorn Portable ❑ PC Portable
❑ PC 386/486 ❑ PC Pentium
❑ Apple Power Mac ❑ Apple 68000-based Mac
❑ Apple Portable ❑ Commodore Amiga
❑ Atari Falcon

18. If you had access to a CD-ROM system how likely would you be to buy the following types of CD-ROM software?

	Definitely	Likely	Unlikely	Won't
Dictionaries etc.	❑	❑	❑	❑
Encyclopaedias	❑	❑	❑	❑
Education databases	❑	❑	❑	❑
Resource discs	❑	❑	❑	❑
PD/Shareware	❑	❑	❑	❑
Games	❑	❑	❑	❑

19. How much do you think you will personally spend on computer hardware over the next year?

❑ Under £250 ❑ £250 - £499
❑ £500 - £999 ❑ £1000 - £2000
❑ Over £2000

20. How much do you think will you personally spend on computer software over the next year?

❑ Under £50 ❑ £50 - £99
❑ £100 - £199 ❑ £200 - £299
❑ £300 - £500 ❑ Over £500

21. How often do you read *Acorn User*?

❑ Every month ❑ Occasionally
❑ Never

22. How many other people read your copy of *Acorn User*?

❑ None ❑ One
❑ Two ❑ Three
❑ Four ❑ More than four

23. How long have you been reading *Acorn User*?

❑ More than 3 years ❑ Between 2 & 3 years
❑ Between 1 & 2 years ❑ Less than 1 year

24. Which are the three most important factors that affect your decision to buy *Acorn User*? (Tick only three)

❑ Front cover ❑ Competitions ❑ News
❑ Hardware reviews ❑ Software reviews ❑ Letters
❑ Hints and tips ❑ Games reviews ❑ Cover disc
❑ Buying advice ❑ Education coverage

25. Please indicate which of these other magazines/newspapers you read:

	Every issue	Often	Sometimes	Never
Archimedes World	❑	❑	❑	❑
RISC User	❑	❑	❑	❑
Archive	❑	❑	❑	❑
Computer Shopper	❑	❑	❑	❑
PCW	❑	❑	❑	❑
Educational Computing	❑	❑	❑	❑
Times Ed	❑	❑	❑	❑
Times Higher Ed	❑	❑	❑	❑

26. In your opinion, how good are the cover discs of these two Acorn-related magazines?

	Excellent	Good	Okay	Poor	Very poor
Acorn User	❑	❑	❑	❑	❑
Archimedes World	❑	❑	❑	❑	❑

27. How important are these subjects to you in an Acorn magazine?

	Very	Fairly	Not very	Not at all
News	❑	❑	❑	❑
Business	❑	❑	❑	❑
Art	❑	❑	❑	❑
Graphics	❑	❑	❑	❑
DTP	❑	❑	❑	❑
Games	❑	❑	❑	❑
Music	❑	❑	❑	❑
Comms	❑	❑	❑	❑
Video editing	❑	❑	❑	❑
Scanners	❑	❑	❑	❑
Hints & tips	❑	❑	❑	❑
Problem solving	❑	❑	❑	❑
Pre-school Education	❑	❑	❑	❑
Primary Education	❑	❑	❑	❑
Secondary Education	❑	❑	❑	❑
Tertiary Education	❑	❑	❑	❑
Simple programming	❑	❑	❑	❑
Complex programming	❑	❑	❑	❑
Programming techniques	❑	❑	❑	❑
Tutorials	❑	❑	❑	❑

28. What do you think of the coverage of these subjects in Acorn User?

	Too much	Just right	Not enough
News	❑	❑	❑
Business	❑	❑	❑
Art	❑	❑	❑
Graphics	❑	❑	❑
DTP	❑	❑	❑
Games	❑	❑	❑
Music	❑	❑	❑
Comms	❑	❑	❑
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Hints & tips	❑	❑	❑
Problem solving	❑	❑	❑
Pre-school Education	❑	❑	❑
Primary Education	❑	❑	❑
Secondary Education	❑	❑	❑
Tertiary Education	❑	❑	❑
Simple programming	❑	❑	❑
Complex programming	❑	❑	❑
Programming techniques	❑	❑	❑
Tutorials	❑	❑	❑

29. If you read another Acorn magazine, what do you think are its strengths and weaknesses compared to *Acorn User*, and why?

____

____

____

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Better by design

Nicholas van der Walle investigates Apollonius, the latest piece of CAD software to have designs on the Acorn platform.

It has been a number of years since Oak Solutions released a new CAD application for Acorn computers. Its previous products included the competent yet spartan *WorraCAD* and the imaginative *PDT* which was among the first 2D parametric design tools on any platform.

As CAD technology has progressed in leaps and bounds since either of these program's initial releases, there was a great necessity to develop an up-to-date software package that incorporated many of the latest features found in the 'real world.' The result is a package named *Apollonius*. Although it is currently on sale to the general public, it has not been fully completed yet – however, upgrades to the final version will be made available at no cost.

Having been advertised for almost a year, it is interesting to note what Oak Solutions claims about the package. Remarks such as 'revolutionary' and 'incredibly easy to use' are quite prominent, but the question is whether or not the software lives up to these expectations.

Having received the original commercial release at the Acorn show last October, with one update since then, there are some striking initial impressions. The manual can only be politely described as 'compact', and the one floppy disc contained within the vast box has a theme in common with the software – it all feels rather vacant.

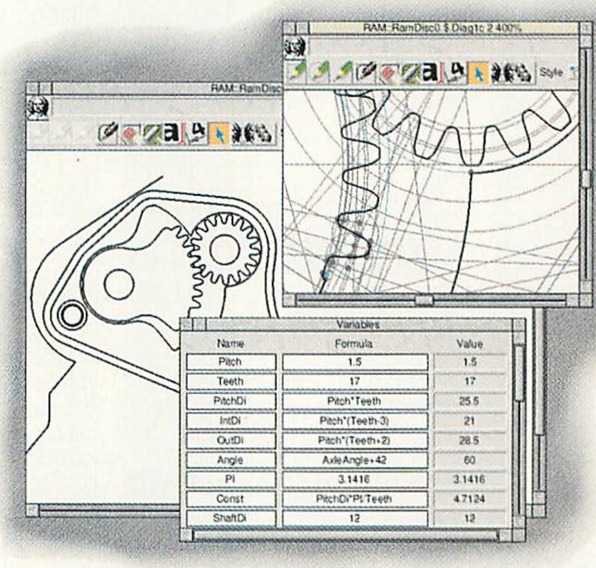
On loading the software, which will happily run on the smallest machines, one is confronted with the conventional registration box and on completion an attractive customary title window declaring the entitled user. By opening a drawing window, anybody expecting the familiar cascade of editing icons to appear will be put in mental trauma for a considerable time. What the user is presented with is alarmingly very little. In fact there is a tool icon count of eleven. This does lead to the question whether the potential is as great as programs which have tens, if not hundreds of individual such icons.

User rehabilitation

When setting out to use this software, it is highly advisable to go against convention and read the manual first. Even though each topic is covered very briefly, one gets the feeling from a very early stage that in order to use the program to its full potential, all previous conventional CAD methodology must be disregarded. The simplest way would be to treat the program as a totally unique form of utility, almost like the contrast between *ArtWorks* and *Studio24*. This is why a more secure guide around its features and capabilities is required than that currently offered by the manual.

The three main draw tool icons are situated on the left of the toolbar – line, circle and point – and may be toggled through using tab. There are no sub-icons when the tools are selected as all the different forms of each, such as tangent and intersection, are accessed by clicking on the drawing in different relative positions. This may almost be called intelligent software, but there is a set of rules which enable the program to determine what the user requires.

The rules for each tool are explained in the manual and these prove to be quite logical and easy to get accustomed to. Also, there are speed increases to be gained as there is no need to continually shuttle from toolbar to drawing. Nevertheless, a major downfall appears when the user wishes to create a specific style or object which seems unobtainable, regardless of the positioning and amount of mouse-clicking on the drawing. In some cases, the only solution is to either



It is possible to create complex functional mechanisms with patience.

Para-what?

The term 'parametric designing' is a comparatively new one among CAD software. The first sign of such programs on Acorn machines came with Oak's previous *PDT* package that was ahead of its time when first released. However, on major CAD platforms nowadays such as work stations, or high-end PCs, such software technology has become very much accepted, and essential in some situations.

Parametric designs entail that all components on the drawing will remain relative to their original parameters. For example, if a line is drawn at a tangent to the outer diameter of two circles, then if one of the circles has its radius altered the line will remain at a tangent. This principle is carried over to any occurrences or objects such as intersections, dimensions or fill areas. The implications are vast, such as instant product redesigns or mechanical layout experimentation, but some of the drawbacks come in the form of extra effort required to ensure that a drawing has the correct relationships entered from the start, and a lack of precise editing capabilities native to conventional CAD packages.

keep zooming in or create the required object using a number of more conventional and readily available objects.

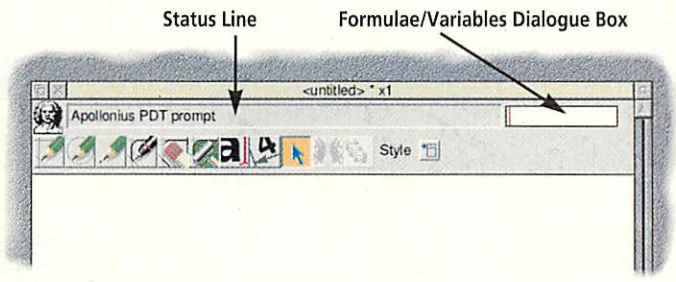
From scratch

As there is no other package available on the Acorn platform that remotely resembles this one, it would be futile to list its features and attempt to remark on how it performs in direct comparison to, say, *ProCAD*. Therefore, to create any impressions it is best to start from nothing and describe the functionality as a design tool.

On setting out to get a final drawing for a commercial engineering project, in as short a time as possible, I made one fatal error; any parametric design has to be planned out quite well as fundamental changes can not be made easily, if at all. This is because everything remains proportional, so it isn't possible to remove an object that a number of other objects depend upon. In an attempt to delete a 'parent' object, all other objects that now have no reference would become either non-parametric (i.e. static) or would turn into error lines that may not be removed.

On the third attempt I found it was wise to enter all the required variables into the variables table, which may include values such as the number of teeth and pitch of a gear and the constant π, which really should have been present as a standard value. Equations may also be constructed using basic trigonometric functions such as COS – such as when programming in BASIC. However, it is impossible to create equations which rely on events using commands such as IF and THEN. The ability to create such equations would come in very useful with a large number of mechanical situations.

Also, values may be determined from existing objects in the drawing, such as the angle of a line and the radius of a circle. The only thing I found which was not parametric was the copy tool. Once a repeat value was entered, the only way to readjust it was to select the individual segments of the clones and enter a new value through the variables dialogue box. The fact that this value could not remain as a variable does tend to render certain designs less practical.

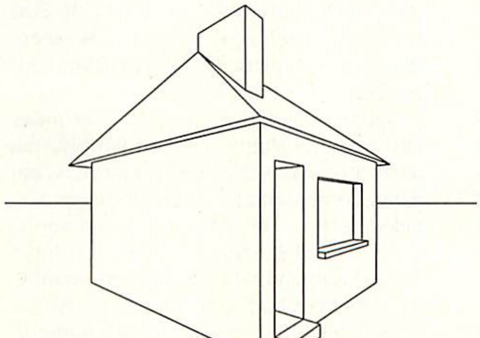


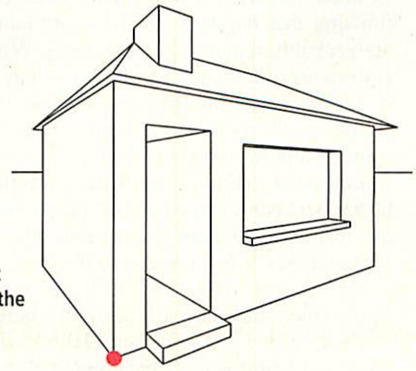
This is all you get for your money – total control is found within the above.

Invisible ink

As with the more conventional CAD packages, most of the lines made will be in the form of construction lines. These are lines that will be removed from sight for the final drawing, leaving only the inked-in lines. With *Apollonius*, ink lines are drawn directly over existing construction lines created by the line or circle tool. Therefore, the ink lines will remain on top of the original parametric line even after being altered. This is a good feature as a drawing can easily start accumulating a large number of construction lines, making it cluttered. By inking in all the required lines it only takes one key stroke to hide the unnecessary lines, leaving a clear parametric diagram. This is where *Apollonius* excels.

Once I had put all data in its place, I adjusted the model slightly to see if a gear mechanism would operate. The fact that with one change in value the whole drawing was re-calculated to give an illustration of the mechanism's functionality proved to be extremely powerful and out of reach of conventional CAD packages.





Although *Apollonius* is a 2D CAD package, some interesting designs may be created due to its parametric capabilities. In this case, the base point of the corner of the house was moved relative to the two horizon vanishing points, producing a pseudo 3D image. Limitations are easily reached using this method as some intersection points will become false and errors will be produced.

The power within

Once the overall parametric model had been created with a great deal of success, it was time to construct technical drawings of individual components such as the pinion gear. This task would have taken minimal time with more conventional CAD packages, but intentionally the drawing had to remain in tact with its original parametric data so that future changes could be made.

In an attempt to export the existing data of each component from the original drawing to a clean drawing sheet, it was disappointing to find that parts cannot simply be 'ripped' out fully and intact. The reason is inherent to this form of package because to export a component all the data it is associated with must also accompany it. Therefore, if the drawing is rather complex and interleaved, the only way to export certain parts is to save the selection as non-parametric *Draw* or DXF files.

To follow the idea of keeping the whole design parametric, I decided that each component must be individually redrawn using the exact data found in the original. This was not too much trouble as the layout of the parametric design had already been conceived. Once I had drawn the plan view it was a simple matter of extruding a front or side view. This proved to be quite straightforward with basic designs, but problems soon arose with more complex ones. The trouble lies with the fact that not all standard drawing tools are present, such as ellipses. This is a fundamental absence in any form of CAD package, even though they should eventually be implemented. The same also applies to area fills, even though the icon is present and the guidelines have been laid in the manual.

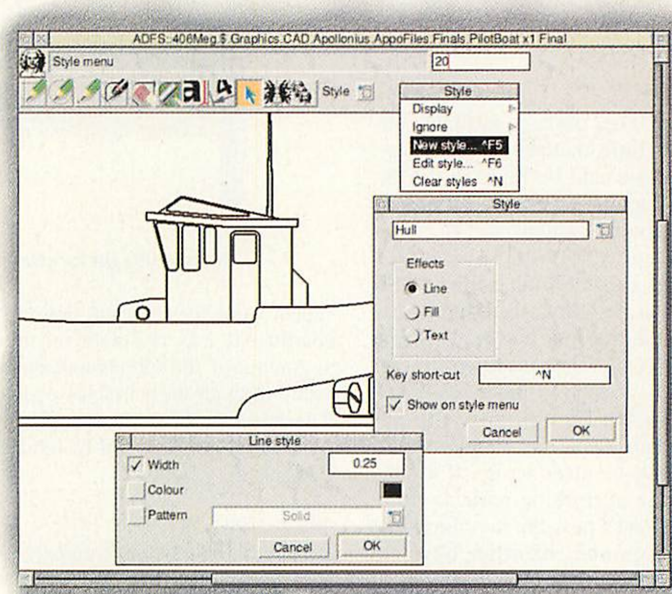
At this stage I was becoming very familiar with the program's layout and had to acclaim the way in which the user may become accustomed to such a change without a great deal of effort. In operation, the program behaves like a conventional drawing board with so few tools. I am almost certain that anybody who has had experience on drawing boards, yet has not made the step to CAD systems, will feel very much at home with this package. In order to finalise the draw-

ings, I inserted dimensions and as well as the *Draw* file border, which may be imported with ease. It is also interesting to note that the contents of a *Draw* file may be made to follow parametric layouts. For mechanism illustration purposes there are many uses of this.

Putting on the style

This package is quite unique in the Acorn CAD market, and the style options are no exception. Anybody who has dealt with the current Computer Concepts *Impression* products will have a feeling of instant familiarity. On consideration, it is a great enhancement over the conventional layers scheme as styles offer the equivalent of cross-sectional layers which makes it all very powerful.

More than one style, which includes line colour, hatch and font, among others, may be applied to any object in the drawing. These styles may be turned on and off and hidden very much in the same manner as *Impression Style* or *Publisher*. In operation it works well even though this feature had not been properly implemented to reach its full potential.



A strangely unique yet familiar style menu structure...

Pen to paper

It is all very well to have any form of CAD system, but if it is unable to plot or print its drawings it becomes rather useless.

With *Apollonius* one of its greatest defects lies in its plotting capabilities, but thankfully this is not carried over to printing. In order to plot a drawing, *Apollonius* relies on another of Oak Solutions' products *DrawPlot*, which is supplied. This program reads *Draw* files and does a very good job of plotting them on the most popular of plotters such as HP-compatible ones.

However, having used this product in the past, I was aware of the problem that standard fonts may not be plotted unless they are turned to paths by a package such as *Draw*. This problem is extended to *Apollonius* as it plots out by converting the drawing directly to a *Draw* file which then loads into *DrawPlot* without converting the letters to a path, thereby sometimes generating an error on plotting. To generate a hard copy I printed the drawing out using *Draw* at a high printer resolution, and then enlarged this drawing to the correct scale.

Decision time

The original questions as to whether the claims of 'revolutionary' and 'incredibly easy to use' were justified are perhaps the easiest to answer; a resounding 'yes – on this platform' to the first and 'yes' to the second. However, software that has to satisfy as many requirements as this cannot only rely on just these two statements being fulfilled.

CAD is, by nature, a very complex and intricate part of computer design. There are so many rules that have to be followed in order to create a universally-accepted drawing that hundreds of tools and icons are probably required in most cases. What is disconcerting about *Apollonius* is that in making the user interface as compact and simple to use as possible, it has neglected some of the detailing involved in creating a technical drawing. As the computer takes increasing responsibility in attempting to judge what the user wants drawn, less specific control is given to the user.

There are still deficiencies with *Apollonius*, and they are currently being worked on by Oak Solutions. Once all the promised features have been put in place, the program will become competent. However, more features still have to be added in order to make this program truly powerful. Essential things such as a more comprehensive plotter driver and further drawing tools (especially ellipses) are yet to be included and there is room for more such as mechanism animation.

However, this may all be missing the point of *Apollonius*. The author intended this package to be able to replace the more conventional CAD programs, yet the final product is not going to do that – it simply hasn't got all the required basic draughting features. Instead I would suggest that *Apollonius* is not a direct competitor of conventional packages but another form of product based upon a new way of thinking in the CAD world. This program is proficient in producing extraordinary results that no other software on the Acorn platform is capable of. If used correctly, *Apollonius* is able to do more than just complement your existing CAD package.

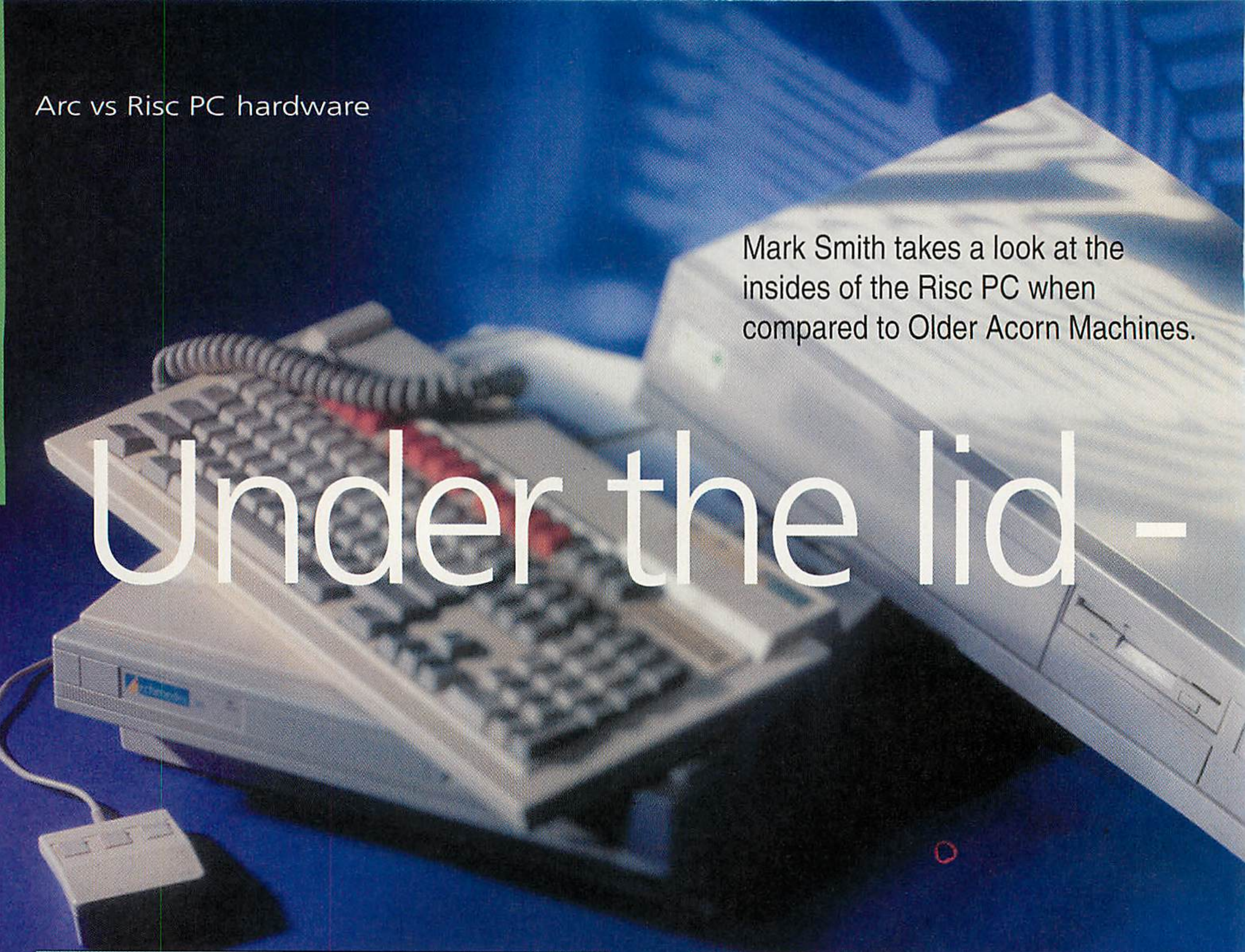
So, who would want to run out today and buy *Apollonius*? Quite simply, the answer is anybody who has both an Acorn RISC computer and deals in computer-aided-design. This program should not be disregarded because it does not have every knob and whistle that can possibly be conceived. If you buy it to replace something like *ProCAD* you are going to be one disappointed person. If you buy it with an open mind to explore new possibilities in design work, I predict a smile emerging on your face. And for those who have never moved a mouse in anger in order to create the new design of wheel, it is not going to take long for that smile to emerge! AU

Product details

Product: Apollonius PDT
Supplier: Oak Solutions
Tel: (01113) 2326992
E-mail: us@oakltd.demon.co.uk
Price: £150 + VAT
Upgrades available

Pros: Unique software with good learning curve for beginners • Simple introduction into parametric designing with all associated rewards • Well designed user interface

Cons: Many conventional CAD features missing • Plotter driver • Manual • Many parts yet to be implemented fully or refined



Mark Smith takes a look at the insides of the Risc PC when compared to Older Acorn Machines.

Under the lid -

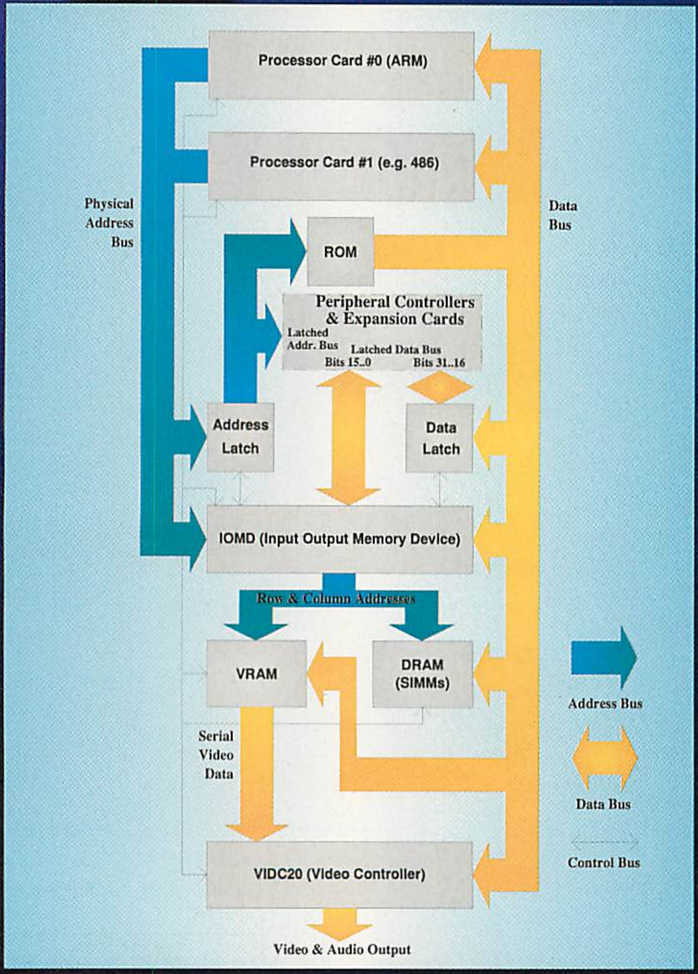


Figure 1: The Risc PC's architecture

The Risc PC was released last April to much acclaim regarding the numerous new features that hadn't been available on Acorn's previous machines. Improvements included vastly improved display capabilities and the options to plug in significantly more memory and a PC card.

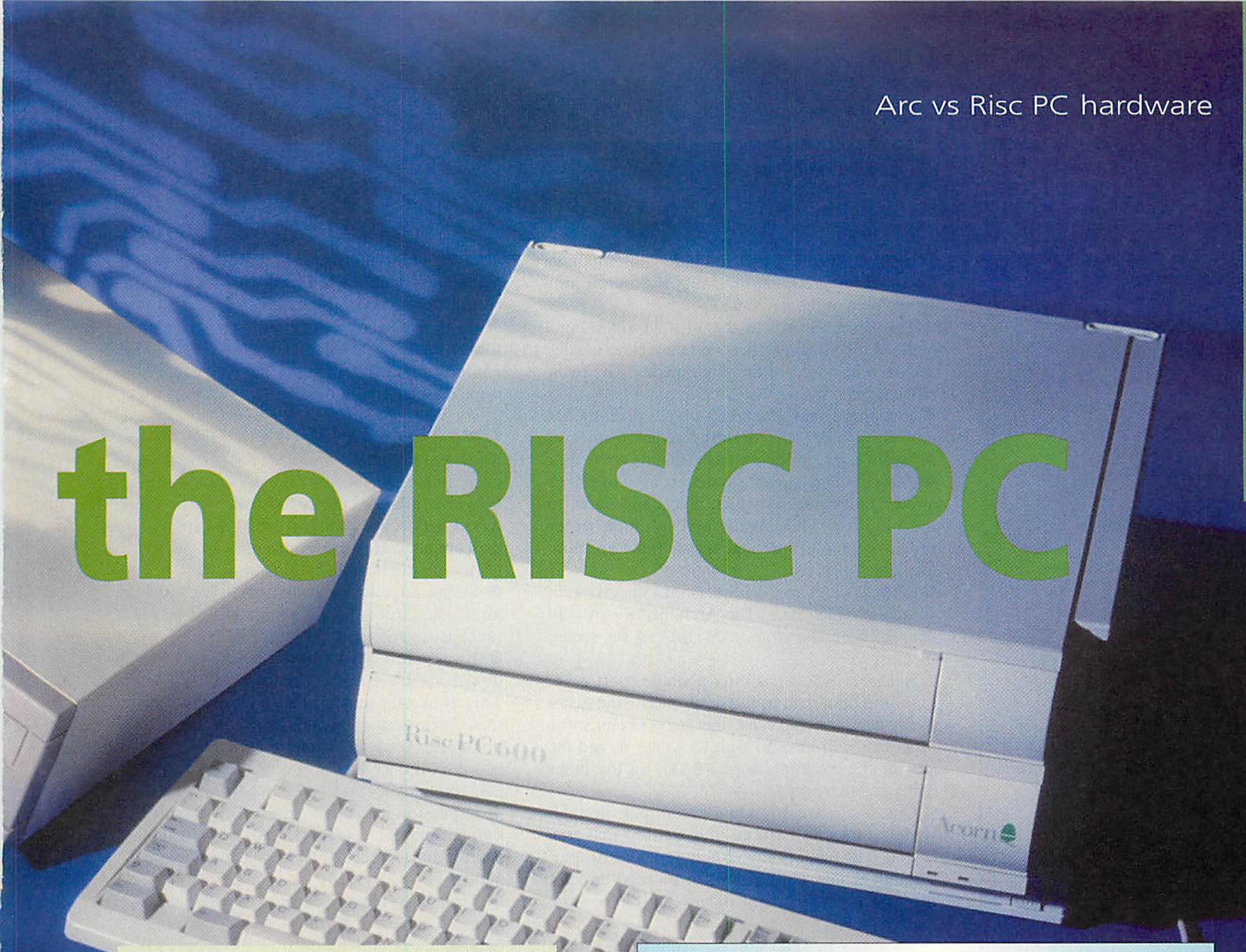
On the surface, the Risc PC running RISC OS 3.5 appears to operate in much the same way as the Archimedes. This is because RISC OS has only been changed insofar as was necessary to support the new hardware, with a few additional cosmetic changes such as support for outline fonts and textured window backgrounds in the WIMP.

Under the lid, the Risc PC is quite a different machine from its predecessor. Figures 1 and 2 show block diagrams of the Risc PC and Archimedes' architectures respectively.

The dual processor open bus

The first thing you might notice in the block diagrams is that the Risc PC has provision for two processor cards. The first of these will usually be your main ARM processor. On current Risc PCs this is an ARM610 as opposed to the ARM2, ARM3 or ARM250 found in the Archimedes. One of the advantages of using an ARM610 is that it supports a much larger address space, 4Gb instead of 64Mb, i.e. 64 times larger. This helps when using the larger amounts of RAM that can fitted in a Risc PC and enables a more flexible memory management approach to be taken.

Like the ARM3, the ARM610 incorporates a 4K static RAM cache which basically caches data read from the main memory, so if it is needed again within a short space of time it can be obtained from the cache quicker than having to be fetched from memory. The



the RISC PC

ARM 610 also includes a write buffer so that writes to memory can be stored until the bus is free and it is convenient for the processor to write the data to memory. A Memory Management Unit (MMU) is a further feature of the ARM 610 and allows 4K 'pages' of physical RAM to placed anywhere within the address space – usually so that memory can be allocated to different areas, each with a specific purpose. The memory management used to be one of MEMC's jobs, but having it integrated within the processor chip is useful when it comes to a multi-processor machine such as the Risc PC because each processor can independently organise its own address space.

The other processor card slot may be used for a variety of purposes. The most popular and likely use is for a card containing an Intel-compatible processor such as a 486. This will enable the computer to run DOS and *Windows* just like any PC-compatible machine.

As well as the processor chip, a second processor card must have additional logic to arbitrate the two processors' use of the bus, that is, prevent both processors from attempting to access it at the same time. Also, if the processor is not an ARM, logic is also required to interface the 'foreign' processor to the ARM bus. In the case of the 486 PC Card, all this logic is in a single 'Application Specific Integrated Circuit' or ASIC. This ASIC also emulates a number of hardware features of a standard PC and includes a secondary cache controller.

The video display

One of the most important advances of the Risc PC is probably that of the video hardware. With the Risc PC there is no longer a limit of 256 colours and SVGA standard resolution. You can now have 24-bit

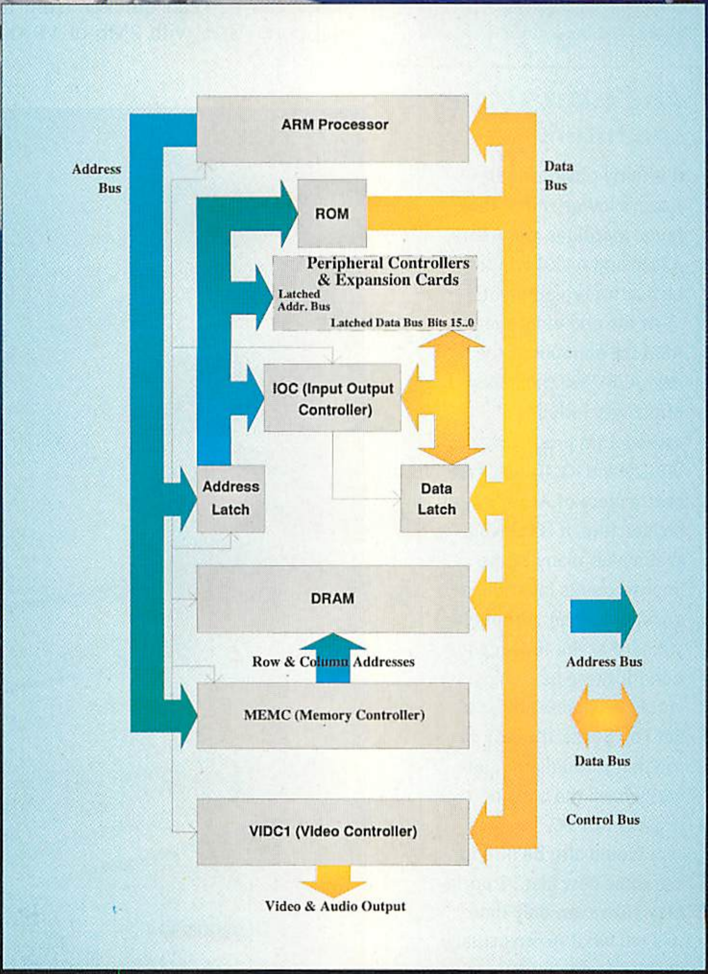
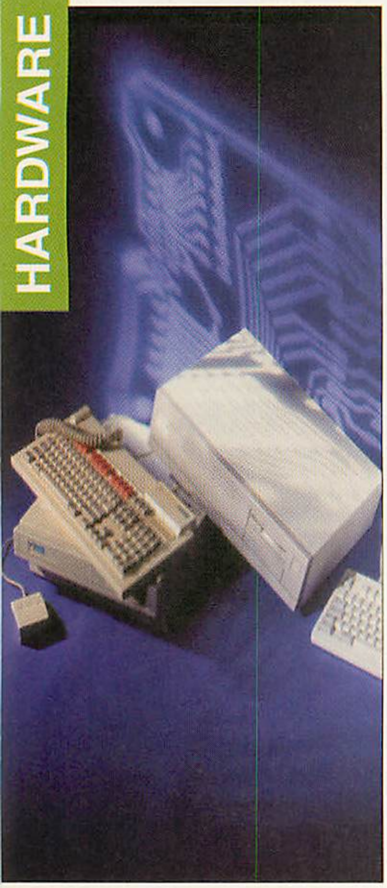


Figure 2: The Archimedes' architecture



true colour displays and resolutions of anything up to 1600x1200, four times the maximum screen area of the Archimedes.

The Risc PC utilises the VIDC20 video controller chip, a direct descendent of the earlier VIDC1a chip used in the Archimedes. The main advantages of using VIDC20 are:

- It supports new 16 and 32-bit per pixel modes and is capable of generating over 16 million different hues, as opposed to VIDC1a's 4096.
- A much more flexible system is used to generate the clock rates at which pixels are output to the monitor. This means a very much wider range of resolutions and frame rates are now available.
- VIDC20 can use Video RAM (VRAM) as a source of video data. The Archimedes can only use ordinary Dynamic RAM (DRAM) for screen memory.

Because DRAM has only a single 'port'– i.e. only one thing can access it at once – the faster video data is being read, the greater chance the processor will have to wait to access it, and the slower the machine runs. VRAM, on the other hand, has two ports.

One is a normal random access port through which data can be read and written just like DRAM. The other is a read-only serial access port through which video data can be read directly into VIDC independent of any activity on the main data bus.

Data can be read quicker from the VRAM's serial port. Also, with 2Mb of VRAM, the video data bus is 64-bits wide – twice as wide as the main bus – doubling the speed at which data can be transferred. Because of this, video data rates of up to 160Mb/sec are possible with 2Mb of VRAM, making displays of up to 1600x1200 in 256 colours at 60Hz frame rate possible with some Risc PC circuit boards.

The DMA enhanced bus interface

Known affectionately as DEBI for short, this has many improvements over the old Podule Bus, all of which increase the speed data can be transferred between expansion cards and the rest of the computer. However, most old cards designed to Acorn's rules should still work.

- Data can now be transferred between the interface cards and the processor 32-bits at a time, instead of 16.
- Expansion cards may each have a 16Mb directly-addressable area known as EASI space. This contrasts to 4K previously which meant that, for example, on-card EEPROMs could only be accessed in 4K chunks. One use for EASI space could be for an enhanced video card, containing up to 16Mb of Video RAM.
- Expansion cards may access memory directly without involving the processor (by a technique known as Direct Memory Access, DMA for short).

Cards have already appeared which make use of these enhanced features, including Cumana's SCSI II card and Computer Concepts' MPEG card. AU

And what about the future?

It is fairly obvious that Acorn's lower-end of the range machines, the A3010, A3020 and A4000 will soon be due for replacement.

At the end of last year ARM Ltd announced the new ARM7500 chip. This effectively includes a cached ARM processor, VIDC20 and IOMD ASIC (the centre piece of Acorn's new architecture, it is this chip that makes many of the improvements mentioned above possible). Although stated that the first application for these new chips would be Online Media's Set Top Boxes, it's easy to see that it could also quite easily form the basis of a cheaper Risc PC.

It would also be nice to see some new Risc PC portables. However, only time will tell what Acorn actually decides to do.



Save over 25 per cent on this exclusive ACORN USER deal

The essential **upgrade**

If your Acorn computer does not already have a CD-ROM drive, now is the time to buy one. Not content with bringing you the first CD-ROM on the cover of an Acorn magazine, Acorn User has teamed up with three CD-ROM drive suppliers to offer you a range of unbeatable CD-ROM drive bargains. Whatever your machine, there is something for you here. All drives offered are double-speed, multi-session drives, with Photo CD capability.

The Cumana Indigo drive

The Cumana Indigo drive is specially tailored for Risc PC owners. It fits inside the 5.25in expansion slot and connects to the IDE hard disc controller – no extra expansion cards are required.

- The most popular Risc PC CD-ROM drive.
- Comes bundled with *SpeedyCD* software (normal price £17.50 + VAT)
- Upgradeable with audio mixer board and *ProArt2 CD* painting software (contact Cumana (01483) 503 121) for details).

Normal price: £233.83 inc VAT
Offer Price: £149 inc VAT



VTi/SONY Risc PC internal drive

This cheap and easy-to-fit drive connects to the IDE connector in the Risc PC and fits snugly in the 5.25in expansion slot in the front of the machine.

- Cheap all-in-one solution for Risc PC owners.
- No expansion cards needed.

Normal price: £195.83 inc VAT
Offer price: £139 inc VAT



Cumana Oscar drive

This external CD-ROM drive connects to the parallel port of an A5000, A4, A3020, A4000 and Risc PC, an elegant solution which leaves all the expansion slots on these machines free.

- Excellent portability – simply unplug from one machine and plug into another.
- Leaves A3020 and A4000 machines free for further expansion.
- Spare connector for dongles and printer – your printer port is still usable.

Normal price: £292.58 inc VAT
Offer price: £199 inc VAT





VTi/SONY SCSI drive

This top-of-the-range CD-ROM drive comes with a 16-bit fast SCSI card with User Port (and socket for MIDI/sampler card in the A3000/A4000 series card). It is an external drive and fits all models except the A4. The supplied SCSI card can be used to further expand your machine with hard drives, scanners and so on.

- Fits all machines except the A4.
- SCSI card allows for further expansion.
- SONY CD-ROM drive.

Normal price: £475.48 inc VAT
Offer Price: £299 inc VAT

Morley Revolution

This external CD-ROM drive comes with a dedicated SLCD (Single Low Cost Drive) interface card. Versions of this card will fit any Archimedes computer except the A4, including the A300 and A400 series and the A540, for which the Cumana Oscar drive is not suitable.

- Dedicated expansion card.
- Suits practically all machines.
- Eject system is software-lockable.

Normal price: £351.33 inc VAT
Offer price: £199 inc VAT



ORDER FORM

Please rush me an *Acorn User* special offer CD-ROM drive as follows: *(Please tick box)*

☐ VTi/SONY Risc PC internal..£139
☐ Cumana Indigo £149
☐ Cumana Oscar.....................£199
☐ Morley Revolution £199
☐ VTi/SONY SCSI.................£299

My computer is a ....

I enclose total payment of £..........................

I wish to pay by: Cheque/postal order made payable to IDG Media

Credit card (VISA/Access/Barclaycard/Mastercard/Eurocard/Connect):

Expiry date: /

Card no: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Name:...

Address: ....

....

.... Postcode: ....

Daytime phone number:..

Send your completed form and payment to: Acorn User, CD-ROM drive offer, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP. All prices include postage, packing and VAT. Please allow 28 days for delivery from when we receive your order.To qualify, all orders must be received by the end of June. E&OE.

Multimedia presentations

CableNews, the package behind Acorn's presentations, has just gone through a major overhaul. Alex Singleton reveals all.

When I visited the Acorn World Show last October, all the theatre presentations booked out *just* before I got there. Those of you who managed to get a seat will have doubtless been impressed by the visual effects used. I'll let you in on a secret – they were created using *CableNews* from Lindis International.

Lindis was at the show and was showing off the new *CableNews II*. This contains all that was in the original plus a number of new features. Nonetheless, it still has many of the idiosyncrasies of the original. The package consists of two programs – *CableMake* and *CableView*. Strangely enough, these are used to make and view the presentations. *CableMake* has some resemblance to a frame-based DTP package, albeit poorly equipped.

Hot spots

The first version of *CableNews* was essentially a hyped version of *SlideShow*, supplied free with RISC OS 3.5. Hot spots give *CableNews* some greatly needed credibility. Previously, *CableNews* simply ran though a presentation from start to finish. However in version two, when a button is pressed hot spots allow a number of salutary events to take place. For instance, a hot spot could be told to go to the subscriptions page if the S key was pressed. Moreover, hot spots can run commands or other programs. A presentation about *INFO could have a fractal run whenever a corresponding key was pressed, or even the CD-ROM drive could be made to start playing. As far as I'm aware, no other presentation package for any computer can do this.

Acorn Replay

If you want to take centre stage, *CableNews* can now run Replay files. These could contain anything from the Editor of *Acorn User* talking about how good the magazine is to the managing director giving the lowdown on profits.

Objecting to the linking

In the PC marketplace, programs which don't support standard cross-program Object Linking and Embedding (OLE) would be frowned heavily upon. While RISC OS does not have OLE as standard, *CableMake* is one of the few programs which has its own implementation.

CableMake suffers from a depressingly slow text editing system. You can't step through letters with the cursor keys and even worse, each time Delete is pressed the whole screen redraws – I timed that to be a massive five seconds on a Risc PC!

Version two gets around this shortcoming. Double-clicking on a text frame loads the text into *Edit*, where it can be modified at an acceptable speed. Annoyingly, *CableMake* doesn't display the last line when saved back into it, so a blank line is required.

Draw files and sprites can be imported into the program – the OLE feature is extended to them too – and *ArtWorks* files are soon to be implemented. Strangely, neither *TableCalc* nor *TableMate* files can be imported in their native formats, only as *Draw* files.

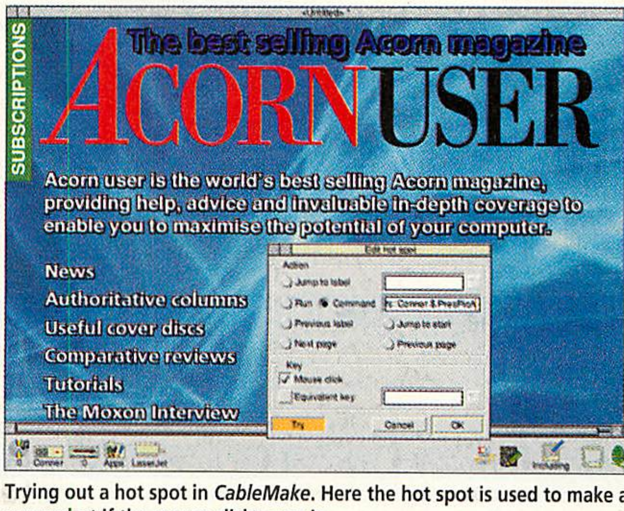
Conclusions

Version two furnishes *CableMake* with at least some features to be proud of. The interface has been vastly improved. However, I do have quite a number of misgivings concerning this package. At times it is irritating to say the least – if you do some things incorrectly it displays a inept error message and crashes.

Editing text by OLE is hardly very WYSIWYG (what you see is what you get). The program only supports styles and not effects and, to exasperate, styles have to apply to a *whole* frame. This means that if you want one word in italics, you can't.

A presentation package is supposed to be an ostentatious program with more spectacular effects than imaginable. So where are the rotated text, dropped capitals, tracking, kerning and the *Typestudio*-style effects?

CableNews has some worrying bugs in it – I certainly wouldn't entrust it to present anything important. In fact, I am somewhat sceptical about how Acorn puts up with such a package. Criticisms aside, *CableNews* can produce some exemplary presentations. However, to do so, many other packages are required in order to provide graphs, rotated text and the like. AU



Trying out a hot spot in *CableMake*. Here the hot spot is used to make a screenshot if the mouse clicks over it.

Product details

Product: CableNews 2
Supplier: Lindis International
Tel: (01986) 785476
Fax: (01986) 785460
Price: £175.01 + VAT

Pros: Impressive • Plays Replay files • Powerful • OLE • 24-bit screen modes supported

Cons: Direct text editing slow • One or two bugs • No effects • Styles apply to a whole frame • No cut, copy or paste

In brief

Under scrutiny this month: TableCalc • ProSHEET • Hermes • Gothic and Medieval Fonts 2

TableCalc and ProSHEET

Although *Acorn User* has recently compared the heavyweights in the spreadsheet market, not everyone can afford the money needed to buy a copy of *Schema* or *Eureka*. Thankfully, there are a number of cheaper alternatives for turning your Archimedes into a number cruncher.

TableCalc

Supplier: iSV Products
Tel: (01344) 55769
Price: £31.50 inc carriage

Pros: OLE with *Impression* • Table-maker and mini-spreadsheet • Economical on memory

Cons: Spreadsheet very minimal • No *Draw* file import • Line thickness cannot be altered

TableCalc is an interesting hybrid program which sits between a true spreadsheet and a table-creation program such as Dalriada Data Technology's *TableMate*. This is not really all that surprising, since the two cell-based operations are similar in many ways.

Like *TableMate*, *TableCalc* interfaces with *Impression* using OLE, which means that a table displayed in *Impression* can be edited in *TableMate*, then saved back to *Impression* in its edited form, smoothly and with the minimum fuss to the user. Cells can be joined horizontally to create larger cells, and a limited number of styles can be applied to the text. These styles can be previewed in a mini *TableCalc* window which lists the styles and gives an example of how they look.

On the spreadsheet side, basic trigonometric functions are provided along with the standard arithmetic operations. Cells can be copied across and down in blocks, though I found it annoying that creating an absolute reference by using a '#' sign fixed both the column and the row of the reference cell.

The problem with *TableCalc* is that it lacks features both as a spreadsheet and as a table creator. As a spreadsheet, the functions are very basic with no ability to create your own to supplement the range, there are no graphing tools and no way of exporting the file to another application with the cell references intact – for instance as a *Lotus* file. As a table creator, there is no way of changing the line width or importing graphics.

With these limitations in mind – and considering the low price – this package is a reasonable buy for someone who isn't going to demand too much from it. Possibly the most likely user of it will be someone who uses *Impression* and wants an application to generate the occasional table and spreadsheet. As it only takes up 260K it is very economical on memory.

ProSHEET

Supplier: Silicon Vision
Tel: 0181-422 3556
Price: £39.95 + VAT

Pros: Fits in 1Mb • Good graphing capabilities • 'Menu' cells can be hotlinked to other parts of the spreadsheet
Cons: Limited list of functions • Poor absolute cell references • Garish design

ProSHEET is a dedicated spreadsheet with an integrated graph package. It offers many of the features of more expensive spreadsheets – hotlinked graphs with 3D effects, CSV import and export, a range of functions, sorting – but also has some notable omissions.

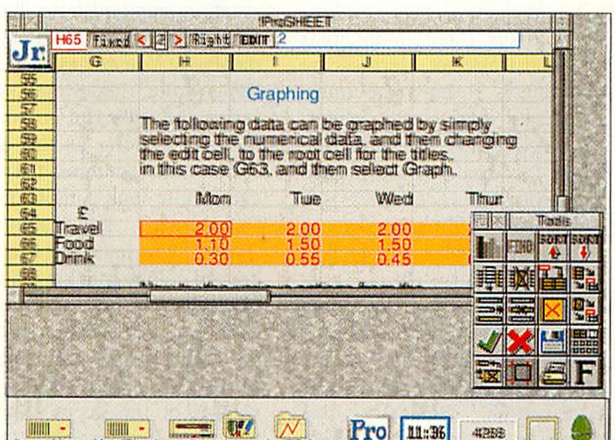
The most worrying of these is the clumsy way that absolute cell references are dealt with. When you copy a selected block, cell references within it can either be absolute or relative, but not a mixture. There is no way to independently fix row and column references. This isn't really good enough and seriously impairs the ability of the package to create complex spreadsheets. You cannot import *Draw* files into cells in the spreadsheet, although you can export the spreadsheet itself as a *Draw* file.

It won't export *Lotus* or similar formats, though, which means you cannot export your spreadsheet to another application with all the formulae intact, as you will need to use a CSV file to do this.

ProSHEET has the ability to create 'menu cells' – hotlinks so that when a cell is clicked upon the cursor jumps to another part of the spreadsheet. This is put to good use in the example file supplied with the program which doubles as an online manual – or rather, it would if *ProSHEET* allowed more than one spreadsheet to be loaded at once. *ProSHEET's* support for interactive help is also welcome, though its user interface is a little garish for my taste.

As a cheap spreadsheet which will run happily on a 1Mb machine, *ProSHEET* does well and offers good spreadsheet functionality. If you're after complicated statistical functions, or the ability to design more sophisticated spreadsheets, then *Resultz* or possibly *Advantage* is worth a look. The other contender, *Calc*, is soon to acquire graphing capabilities, and will be reviewed in due course.

David Matthewman



The ability to move around *ProSHEET* files by using hotlinked 'menu' cells is very useful, and is put to good use in the tutorial spreadsheet supplied with the program. The cell containing blue text is linked to a list of cells, all of which move the cursor to different parts of the spreadsheet.

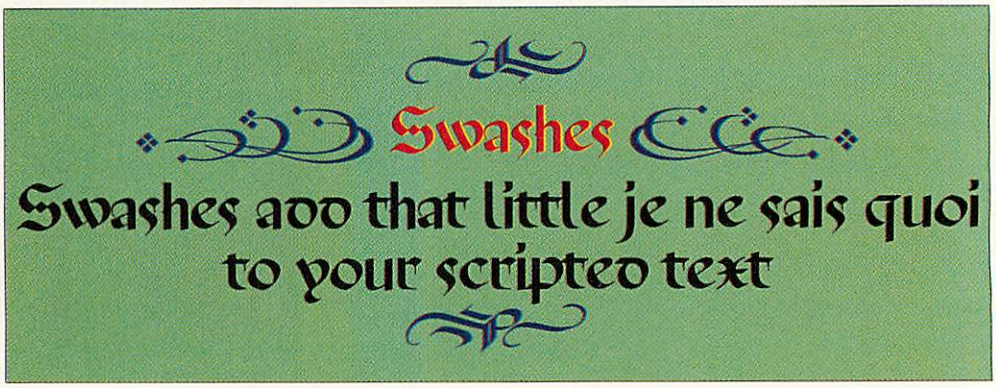
REVIEW

Gothic and Medieval Fonts Collection 2

Supplier: The Datafile
Tel: (01934) 823005
Fax: (01934) 823005
Price: £40 inc. VAT

Pros: Designs unique • Fonts of a high quality • Great fun

Cons: Manual hard to read in places • Very specialised



Some people collect fonts as if their lives depend on it, and some people make do with very few fonts. Being from the world of magazines, I'm definitely from the latter school of thought – I have very few fonts and have never seen the point of owning 250 fonts, along with programs to keep them tidy, and programs to print out reams of examples. So it's a pleasant surprise to find a pack like the *Gothic and Medieval Font Collection.*

The pack consists of six outline fonts (giving 11 faces in total), and three *Draw* files containing each letter in the fonts. There is also a large collection of fancy borders you can use in your designs, and using *Draw* or *ArtWorks* these work fine. The borders aren't designed to be dropped into *Impression*, but considering the way *Impression* creates its borders, you're better off using *Draw* with these designs anyway – they aren't the sort of borders that fit arbitrary frames. The borders themselves are very ornate, and are really quite attractive.

One of the most enjoyable features of some of these fonts are 'swashes' – those curly lines you can use to tart up your text. Each swash is a character in its own right, so you can enter them using the keyboard (with the Alt key and numeric keypad), or by using the *NewChars2* application provided with the fonts. To be honest, *NewChars2* isn't that much better than Acorn's *Chars*, and doesn't come close to Beebug's excellent *CharSel* which comes with *Ovation*. I'm surprised that The Datafile, master of the Public Domain, hasn't managed to find a better version to include.

At the end of the day, this pack contains a collection of ornate and well-designed fonts and borders, and if that's what you want, this package is pretty impressive. It still won't make me a fan of excessive font usage, and the manual is a perfect example of how too much Celtic writing can be almost impossible to read, but along with the first font pack, The Datafile has filled a niche market effectively.

Mark Moxon

Hermes

Supplier: Base 5
Tel: (01483) 761197
Price: £25 (no VAT)

Pros: Lots of features • Very comprehensive options • Great for hackers

Cons: Only suitable for the technically minded

Whatever next? *Hermes* is a Desktop application which is based around the mythical god from ancient Greece, and as such covers three main areas on your Desktop: Hermes the Messenger, Hermes the Interpreter and Hermes the Scientist. No, I didn't get it at first either, but whatever the strange background plot, *Hermes* is a useful little blighter.

Take the Messenger part first. Essentially *Hermes* sits on the icon bar, and dropping text files onto the *Hermes* icon 'types' that text file at the caret, but processes it at the same time. Basically this means that if you have an *Edit* window open, and you drop a text file containing the text:

```
The time is ¤NOW¤
```

then what actually appears in the *Edit* window, character by character, is:

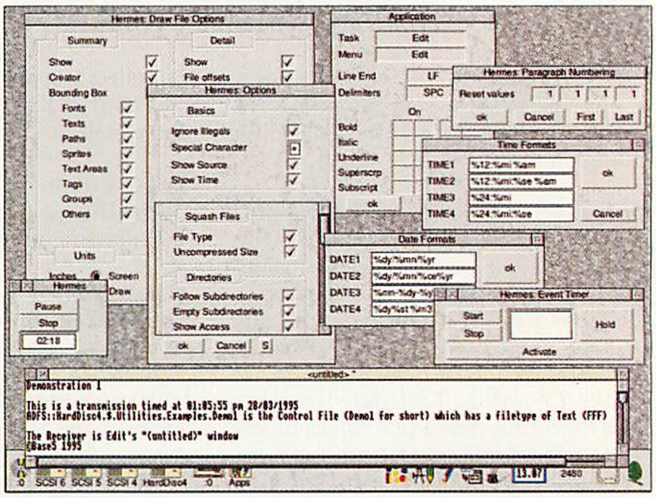
```
The time is 12:41:46 pm
28/03/1995
```

What happens is that *Hermes* replaces keyboards in the original text file – words surrounded by the ¤ character – with its translation, so ¤NOW¤ becomes the current time, and so on.

The list of available keywords is comprehensive, and it is easy to see how Hermes could be used sucessfully to create a standard letter header, or standard entry template in a database. You can even include bold, italic, underline, superscript and subscript commands in text, as long as the application that contains the caret can handle such complexities.

As with any automatic 'typer', you have to be a little careful about mucking around when it is typing: moving the caret is fatal, proving that this particular god isn't omniscient. Still, it's unlikely that you'll want to do this, as most people will let *Hermes* chug along until it's finished.

In Interpreter mode, you drag a non-text file to *Hermes*, and it outputs lots of interesting details about that file to the caret. You can tailor the information produced, so for *Draw* files, for example, you can choose whether to display bounding boxes, object sizes and so on. This area of *Hermes* is extremely comprehensive, and is very useful to programmers, though I would have liked to see just a little bit more information given about window template files.



Hermes **has a lot of windows. A lot of windows for a lot of features...**

Finally, *Hermes* is a Scientist too. It can time events, monitor details like the icon handle of the icon under the pointer, move the pointer precisely, capture windows as sprites, convert foreign graphics files to sprites using *ChangeFSI*... the list goes on.

So, *Hermes* does a hell of a lot. Along with other utilities in this bracket, like Rheingold's *Vigil*, *Hermes* probably contains at least one feature you couldn't live without, and is worth the £25 asking price. For me it's the file information provider, and the window grabber, but there are plenty of other features to choose from. Highly recommended.

Mark Moxon

integrex

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myndgaemz
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Asylum, an addictive platform shoot-em-up game, is still available for £7.95. You can also buy Asylum and Oddball together for the special price of £14.95. Both games work on all Acorn RISC OS machines, including the RISC PC, with 1MB of memory or more. Unfortunately we are unable to accept credit card orders.

GAME SHOW

Welcome to another column packed with news and hints – but before I continue, there's something I should perhaps reveal to you. I know it's a particularly unsavoury habit, but I have been known to play games on PC compatibles from time to time. It's all in the name of research, I assure you – as soon as I've finished, I scoot away from the machine like the metaphorical scalded cat.

What, you may ask, is the point of my telling you this? Well, there are still certain types of game that have not yet appeared on the Acorn, and it pays to keep your eyes open in this market. For instance, the recent wave of *Doom* mania that's been sweeping the globe has sparked off several new products – and from what I've seen, they look pretty *interesting*. Anyone who's seen *Rise of the Triad* will immediately understand me when I say that the graphics are *good*. I'm not suggesting they'll make their way to the Acorn but – well, perhaps we'd better wait and see. After all, the Risc PC does have a fair amount of power, doesn't it? Here's hoping...

Burning silicon

Last month I mentioned the imminent release of Oregan's arcade-style racing game, named *Burn 'Out*. While we're waiting for the final version, I thought I'd eavesdrop on the penultimate stages of production. We join the team of David Flynn, Ian Jeffray and Joe Nash as they enter their last lap – they've got a prototype game engine up and running and it's time to start the fine tuning.

Dave: 'After a fair amount of work we had managed to get a 3D track assembled, with the player driving a buggy and music playing at the same time. The next step was to drastically improve all our prototype routines for moving the road around and displaying objects.'

Ian: 'Some time was spent creating new routines to form the smooth, undulating bridges from the individual logs that Dave had drawn. Simple rectangles were used for the prototype, and the routines were refined from there to produce the full-blown sprite-scaled track. Specially efficient sprite-scaling routines are used for processing the objects at the side of the road such as trees, signs, and the scaffolding that holds all those bridges up!'

Dave: 'Once the new track routines had been placed into the main engine the game took on a new shape – previously we had been restricted to small bridges, but with the new functions we could throw the track into the air, add a few bends and capture that 'roller coaster' feeling.

'We had decided to give the player as many useful options as possible when playing the game, so time has been spent creating all the necessary pieces of code and graphics to allow for them. It's possible to change the controls to match your personal preferences, and you can set the difficulty of the game and the number of credits you start off with.

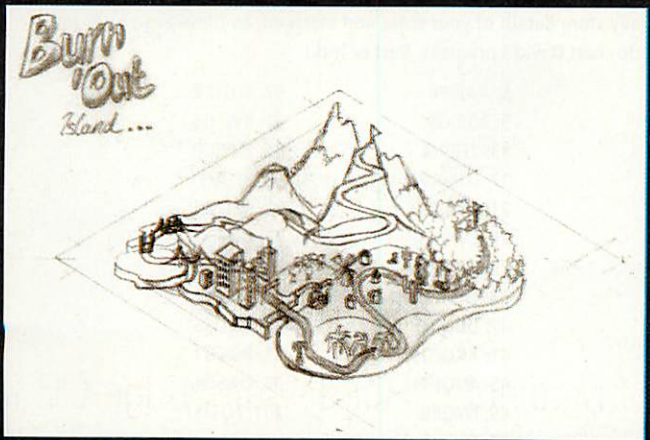
'We've also tried to take into account all machine types so that on the slower models some of the larger sprites can be made smaller or turned off to keep the speed up. For Risc PC users we're throwing in some extra features such as parallax scrolling and more track objects. The program automatically senses which sort of machine you are using as it loads, and sets up the relevant options so that the game is 'primed' for your machine as soon as it's run.

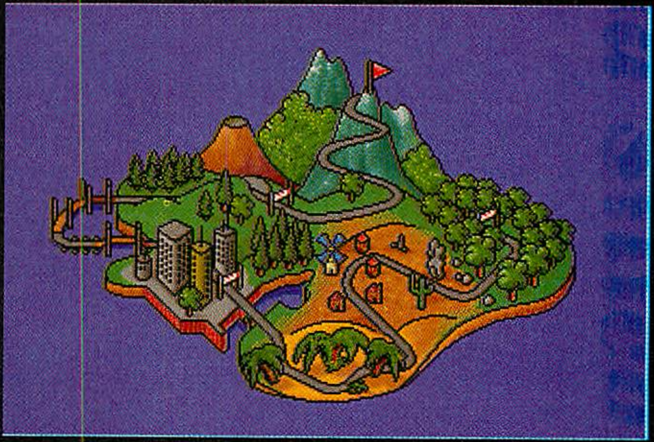


'While all this was going on, Joe was producing all the in-game tunes needed, and plenty of others to add that arcade feel – arcade games rarely fade into silence, so we're hoping to keep the music and sound effects going.'

Joe: 'All the tunes were converted over to *Digital Symphony* format, and compiled together to save memory. *Symphony* allows us to effectively incorporate our sound effects into the tune, so that the sounds and three channel music can be interleaved. This means we can have stereo sound effects and music playing at the same time during the game. There are 20 in-game tunes, and in total there's now well over 60 minutes of stereo arcade-style music.

'As well as these, special tunes have been created for all manner of different screens outside the main game. Work has begun on creating the sound effects, synthesising the sounds from scratch on my Yamaha's internal FM tools. For the more complex sounds – things like waves, the engine sound, and tyres hitting logs – we will be going on location to obtain real life recordings.'





The *Burn 'Out* island – in the original sketch form, and the finished sprite.

Dave: 'Along with the graphics for the 'out-of-game' screens, I seem to have gone font mad over the past weeks! Ian has needed all the characters for the clocks, score digits, menus, high-scores, and messages. The introduction sequence has slowly been taking form too. Now we have the main game engine in place, the main job is to replace much of the graphics for the logs, trees, and roadside objects for the first scenario. The different cars for the game have been designed, and Ian is in the process of writing the collision detection routines so that they can be incorporated properly – at present the game is a little easy as you can drive through solid objects!



If you want to get that bit further in *Arcturus*, try the codes sent in by David Bone.

'The fantasy island that *Burn 'Out* takes place on has now been designed so that players can see what areas lie ahead after they've completed the current levels. As you can see from the diagrams, much of the graphics work is sketched out quickly with plain old pencil and paper. Only when we've finalised the ideas do they get transferred onto the screen.'



Thanks to Dave, Ian and Joe for letting me witness their progress. Work's coming along at a fast rate and *Burn 'Out* should be ready to hit the shelves very soon – I hope to bring you the final instalment of the diary in next month's column. Needless to say, the Game Show will be the first to tell you how the finished product handles, so don't turn that page! I'm also pleased to say that they've already got tentative plans for a future release – although still in the earliest of design stages, the provisionally-entitled *Yoyo Twins* looks as if it could add another seriously cute platformer to the Acorn market.

Games across the Net

I'm pleased to announce that from now on, you'll be able to contact the Game Show by electronic mail, so if you have any information to send in or indeed questions to ask, then here's the address to use: *HAL@acornusr.demon.co.uk*. I'm particularly interested in compiling a full set of passcodes for Fednet's current masterpiece, *Star Fighter 3000*, and I'm also on the lookout for some winning strategies for *Sim City 2000*.

My own tactics are proving to be quite successful, but most of them involve fiddling with the game files – not the most legal of operations! Although it's been a bit quiet on the games front as of late, I'm confident that several of the titles I've heard about will be blossoming any moment now – and you can guarantee I'll be giving you all the gory details as soon as I can get away with it. See you next month.

Steve Munford

Passcode corner

This month, I'll take a look at *Arcturus*, the three dimensional gyroscopic adventure from Oregan. David Bone has written in to supply me with a whole host of codes which reach up to the heady heights of level 101. If you've played the game, you'll know that the codes actually store details of your score and lifecount, so these passwords really do chart David's progress. Best of luck!

5: AARIFB	57: TNTIKO
9: 2GRIG4	61: RWTILS
13: 2FRIH4	65: BVTIU0
17: DJRIA0	69: XITIV3
21: DTRIBP	73: P2TIWD
25: EWRICK	77: NDSIX4
29: MYRID5	81: JGSIQG
33: OCQIML	85: 2ESIRU
37: UBQINF	89: KKSIS5
41: XKQIOY	93: ROSITT
45: 4NQIPN	97: QNSI2M
49: IWQIIB	101: FQSI3T
53: 50QIJF	

Face To Face

Supplier: SYRAsoft
Price: £18.99
Tel: (01452) 750128
(after 5pm)

I touched on this one the other month and confessed to having not got to grips with it all yet. In fact, I just know I wouldn't have done the game justice if I had attempted to review it. Now, after several weeks of hands-on playing, I can safely say I've done my bit for King and country, low wing and bi-plane, .33 Browning and 90mm cannon.

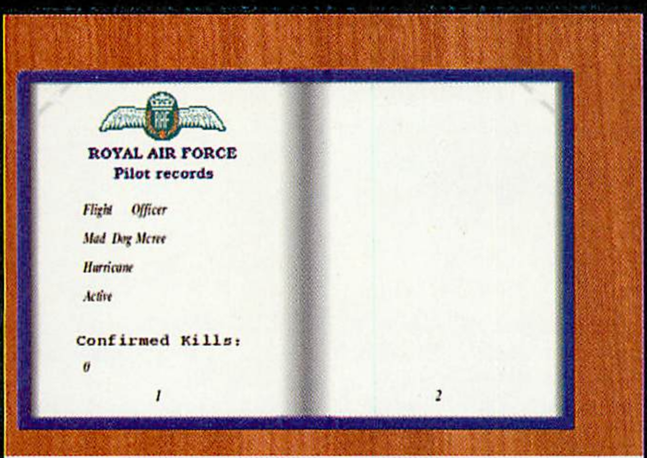
A few things first. It may surprise readers to hear that I have actually flown the various aircraft depicted in this game; I've had hours and hours of hands-on experience in a Spitfire, a Hurricane and a Tiger Moth. Okay, maybe they were slightly smaller than the real thing, though at nearly seven feet wing tip to wing tip and a full house of flaps, landing lights and even a retracting undercarriage, these scale monsters give you more than an indication of what the real thing would do. Knowing how a plane is going to handle, I was especially critical of this game and its promises. I have to say it lived up to every one of them. *Face to Face* is very accurate for a computer simulation and the whole experience is certainly as near as I have seen to flying these much admired aircraft.

The game will run on more or less any format including the Risc PC, and requires 2Mb of RAM. The detail can be fine tuned to a particular machine and this means everyone is going to have a fair chance at reality. Control is simple enough through the mouse, keyboard or joystick.

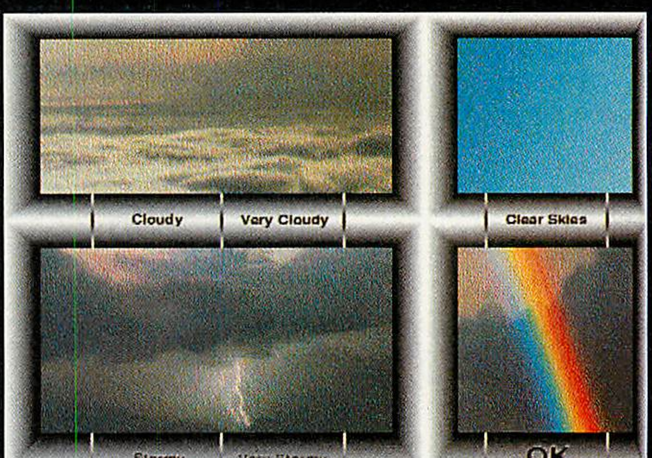
Set in the summer of 1940 you are thrown into the height of the Battle of Britain, and through a choice of airframe must survive 30 varied missions ranging from escort to search and rescue.

Europe is carefully drawn around you and is based on accurate maps of Great Britain – well southern Britain to be more precise. You begin as a cadet and after basic training are assigned to a plane, squadron and a pair of comfortable slippers. You also get medals for performance and bravery in combat, not that straining the fingertips and staring at the screen is going to place you six feet under, so there are no excuses for not helping fellow pilots out in these times of need. Now I could warble on about the gameplay, but a picture says a thousand words, so I'll talk you through it all picture by picture. At the end of the day, the game is very user friendly and highly playable. The varied missions mean you will be put to the test in all aspects of flying.

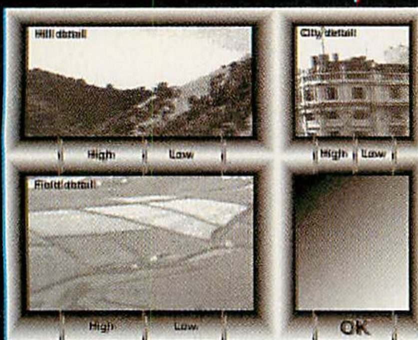
Setting up the game beforehand is vital and although the disc swapping might seem a bit tedious at first, be thankful the clever programmers managed to squeeze it all on only two floppies. If you like simulations, *Face To Face* has to be one of the best I have seen to date.



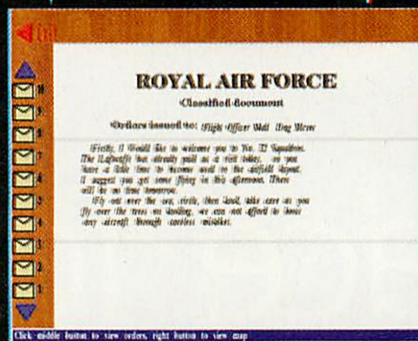
First things first, it's time to put your name on record. Here, I selected a common little call sign that seemed to be popular in the Gulf Conflict (that's the one the Americans won for us all). I heard there were casualties on both sides, thanks mainly to these American pilots called 'Mad Dog.' Help!



Once the maniac at the yoke has his position on paper it's time to play God with the elements. Weather detail affects plane handling and visibility and should be taken very seriously. Cadets should favour clear skies and not even contemplate storms, unless they want a serious piece of trouble to pilot through.



Setting the detail is probably the best way to tailor the game to your machine, with the highest settings reserved for the few lucky Risc PC owners. I found you can find the best combinations after messing around a bit, and my advice is to take a high detail setting in the hills and fields but a lower setting for the city selection. After all, British towns and cities aren't all that great, are they?



Along the left-hand side there are a series of envelopes containing the 30 missions. Some are quite easy, some are rather hard, some are... Here, you can see all I have to do is fly out over the water and land back on the runway. Funnily enough, I crashed just after take-off on my second attempt and hit Escape. The game promptly told me I had completed the mission!



Consult the map and plan your route. Take care to judge the size and distance of the towns, cities and airbases, so if things get out of hand and you get a bit lost at least you have a fighting chance of landing somewhere useful and living to fight another day.

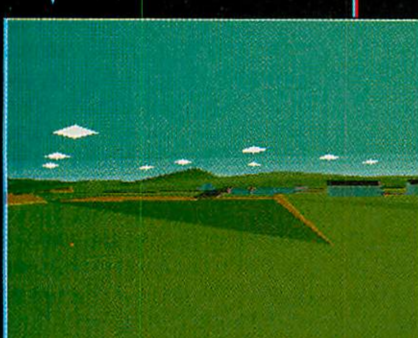


After a brief chat with one of the pilots – he didn't understand a word I said – it's time for off, off, off! A rather loud and piercing bell warns you of a scramble, and with that you climb into the cockpit and are faced with this daunting view straight up the runway. Ahead you can see a few planes already waiting for you, both friendly and otherwise.

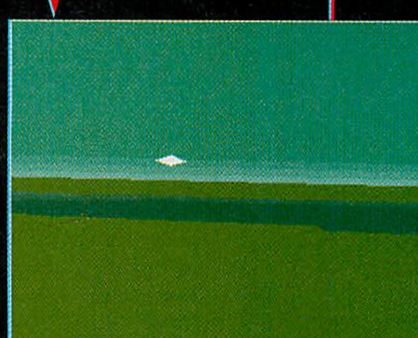
To start the aircraft rolling, throw open the throttle, keep the wings level, the nose straight and let the ground speed build up. Once things look good, pull back very carefully on the stick then retract the undercarriage. Yippee!



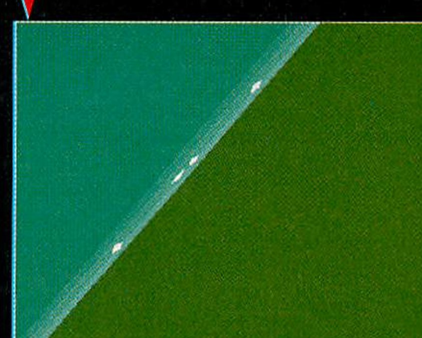
Throttle back, survey the instruments and if all looks well and the sky isn't too crowded, begin to head towards your first objective. This is easily done by simply looking at the headup and taking note of where the little red line is. Line up on that and you won't go far wrong.



Although the cockpit view provides some valuable info, switching to the chase view allows a pilot to see other planes in formation or even the enemy movements in dogfights. When things get a bit hectic, switch back to cockpit so you can consult the instrumentation on damage or whether, for example, the undercarriage is in the down position.



If all the detail has been set up right you should be able to pass over nice graphics like this without any sign of slowing down from your computer. Each town and city is slightly different so you can roughly judge where you are. Watch out for those pesky barrage balloons which just get in the way. Oh, don't worry too much about the bangs from the distance – I think that's all part of the ambience.



After a hard few hours of combat, rescue and general escort duty, it's time to attempt a landing. Align yourself up on the runway then throttle back, drop the flaps and release the undercarriage. If all goes well you should hear the squeal of rubber and the plane will come to a gradual stop after the brakes have been applied. A good tip is to balance the descent on throttle rather than the elevator so there is little risk of a stall. Time for a cup of tea and to break open the polish for the medals!

Letters

Fantasy land

We are all young boys at heart. While some boys indulge in the 'Fantasy Football League', dreaming how they would behave if they were football managers, sad anorak-wearing Acorn users imagine what they would do if they were a Product Development Manager.

I hope you enjoy the 'fantasy advert' enclosed. If there is a serious side to this I have tried to produce an advert for the Risc PC on a single side of A4, in a format which could attract attention – i.e. sales – in a PC magazine. Words and phrases like 'SoundBlaster', 'RISC', '32-bit', 'PowerPC', 'plug and play', 'MS Encarta' and 'Internet pack' are all pretty meaningless on their own, but are the key phrases sought out by consumers scanning the likes of *Computer Shopper* and *PCW*.

The prices are intended to be competitive with straight Windoze (sic) PCs. It's the same strategy as Apple – 'Hey! A RISC computer for £1299!' – except you get a real working machine for that money.

Perhaps the next advert could include multiple Strong ARM processors, SCSI 3, secondary cache and RISC OS 4 running under TAOS?

Ian Trimble
Nottingham

Indeed, if only any of the items in the last paragraph actually existed. Strong ARM is just a project at the moment, SCSI 3 (or FireWire as it will be known) is still in Apple's labs, Acorns don't yet have secondary caches, and as for RISC OS 4... keep on dreaming. (MM)

Risc PC700

Will your PC still be state-of-the-art in three years' time?

Acorn has sold 32-bit RISC computers since 1987. We are proud to announce our latest machine: the Risc PC700.

Powerful

Powered by the ARM700 RISC processor, the Risc PC is roughly equivalent to a Pentium but many applications feel faster due to:

1) Acorn's 32-bit multitasking operating system, RISC OS 3.5, which features a drag-and-drop filing system, solid window drags and anti-aliased text.
2) An integral video processor giving a desktop resolution of up to 800x600 in 16.7 million colours, or up to 1600x1200 in 16 colours (with 2Mb VRAM and 17in monitor).
3) Optimised 32-bit software with extensive use of assembler code.

Easy-to-use

The operating system and software are intuitive and easy to learn. This is a major reason why Acorn has been so successful in supplying computers to schools. Hardware upgrades are plug-and-play: no configuration is required.

Multi-processor

The 32-bit bus architecture supports multiple processors. Additional processors share resources such as RAM, disc storage, and graphics. A card-mounted 486 can simply be plugged in to run your Windows™ software simultaneously with RISC OS.

Expandable

The base machine has two expansion card slots. Up to three extra 'slices' can be added, each containing two expansion card slots, a 5¼ inch and a 3½ inch drive bay. The case can be opened without tools – expansion cards, processor cards or memory can be replaced in seconds.

Connectable

Acorn Universal Networking allows connectivity with Apple Macs and PCs; the TCP/IP suite allows access to Wide Area Networks via the Internet; and OmniClient software allows access to networks such as NT server, LAN Manager, Windows for Workgroups, and Apple.

Future-proof

An upgrade to an ARM800 processor, offering at least a 50% performance increase over the ARM700, will be offered at a guaranteed price of £100 (subject to inflation). Third party developers are working on a second-processor card containing a PowerPC™ chip. An expansion card for mounting up to five ARM chips plus a 486, operating under TAOS, is under development.

Base Model £1299

Single 'slice' machine with:

- ARM700 55MHz CPU
- RISC OS 3.5 32-bit multi-tasking operating system in ROM
- 4Mb RAM (expandable to 256Mb)
- 1Mb VRAM (expandable to 2Mb)
- 420Mb IDE hard disc
- Floppy disc drive capable of reading RISC OS and DOS High Density discs (Apple Macintosh discs readable with additional software)
- 32-bit colour graphics
- 8-bit 8-channel stereo sound
- Two 32-bit plug-and-play expansion slots
- Software including text editor, bitmap and vector graphics, printer drivers, Acorn Replay video software and 50Mb of JPEG graphic images
- Acorn Advance Integrated Office Software
- 14in EPA-compliant multiscan monitor, keyboard and three-button mouse
- 12 month on-site warranty
- *Tested and supplied by your Acorn dealer (contact Acorn for list)*

Modular Upgrades

Additional memory	
Additional: 4Mb RAM	£120
8Mb RAM	£250
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16Mb RAM	£460
1Mb to 2Mb VRAM upgrade	£100
Additional 'slice' – 2 expansion slots plus 5¼ inch & 3½ inch drive bays	£100
16-bit sound card (with SoundBlaster emulation)	£70
SCSI 2 card	£150
Ethernet card	£100
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Philips Brilliance, 0.27in dot pitch, max resolution 1600x1200	£450
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Double speed CD-ROM including interface	£150
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All prices exclude VAT. E&OE.

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Tel: (01223) 254254
Fax: (01223) 254262
E-mail: RiscPC@Acorn.co.uk

A spoof Acorn advert – don't take it too seriously. But would it work in PC magazines?

Sprite pool

I am sure that I am one of many software developers who struggle to design sprites for both application directories and button bars and wish for a standard set of icon sprites.

Therefore I propose to set up a library of sprites which any developer, both public domain and commercial, could use in their applications. The three main areas that the library could cover are:

1. Icon sprites, e.g. button bar sprites. The library would probably contain many different sprites for the same function, e.g. saving, but would show the popularity of each to encourage developers to use the most popular 'standard' sprite.
2. Application sprites. Current application sprites, obviously, could not be used for other applications, but could give designers inspiration to design their own. This area could also contain sprites of applications which never reached release.
3. General sprites such as textures (such as marble, blends and so on) and shapes (such as circles, triangles and so on).

I do not expect the library to provide sprites for the standard RISC OS tools and sprites, since many people believe that Acorn's *NewLook* is superior to most others.

The object of the library would be to help the 'artistically challenged' among us to design applications with well-designed sprites, and to encourage standard sprites across the industry. This can only benefit the Acorn industry as a whole, including the larger commercial companies, allowing applications to be more compliant with one another, reducing the learning curve of applications for new users, and increasing user productivity.

I would like to hear your

Write to: Acorn User, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP

comments as well as those of Acorn users and developers, both small and large. My address is 32 Hale Road, Heckington, Near Sleaford, Lincolnshire NG34 9JW.

Lee Atkinson
Lincolnshire

Bang, crash, wallop

Who designed the AKF18 monitor? Was it the same Herbert who set up Microsoft and then wrote Windows? I have had an A5000 since October 1992 and have had to send my AKF18 away twice to be repaired under warranty.

It is now going wrong again (making crackling noises, interference on the screen and giving off a burning smell) which means I have to send it away and wait months for it to be fixed.

David Armstrong
London

See Viewpoint. (MM)

Publishing plus

For the first time I have felt like writing to a magazine about one of its articles. The recent article on professional desktop publishing in the February issue of *Acorn User* was excellent. It provided an excellent insight into the production of a magazine and the use of *Impression Publisher*.

This article for me has been one of the best in recent months, as it is most appropriate to my use of an Acorn Archimedes. The inclusion of the top ten tips for *Impression* users, and the utilities on the disc, were particularly valuable. With the enormous user base of *Impression*, many short cuts or useful tips are not passed on to others, although the various magazines do pass on as many as they receive. I was glad to see that with your intensive use of the software concerned, your team is able to pass on such excellent hints and tips.

I would certainly like to see articles of this depth (or even greater) covering DTP. Most people can work out the mechanics of the software but discussing ideas on page layout, which mostly involves artistic or graphic design, is always useful and informative. How about persuading your graphical design team to do a future article on page design and layout for different types of publication such as magazines, leaflets, books etc? There are several books on this subject but they are usually based on a Macintosh system, and another viewpoint is always valuable.

I am very glad to see a magazine about Acorn machines believing in their technology.

Graham Dark
Via the Internet

We hope to be bringing you more articles covering design matters, primarily covering the graphics area. Suggestions would be gratefully received. (MM)

Camera, no action

As an amateur film maker as well as a computer user, I read all your articles on digital video with interest, but I noted that unfortunately no products of any practical significance will be on the market for some time. I then turned to the adverts, hoping to find editing aids for the present day mass-ownership of tape-based analogue technology, i.e. camcorders and video recorders, but alas to no avail – there is absolutely nothing!

The PC platform, on the other hand, now has a wide range of editing systems and seems to have overtaken even the Amiga. Why can't Acorn software developers get down to producing something like the well-specified *Video Workshop for Windows*, for example. I have made enquiries about this system and am told that it will not run on a Risc PC fitted with a 486 card, so although I have used Acorn machines ever since the Beeb, it would be pointless to upgrade from my Archimedes 420 to a Risc PC as I had originally intended.

PC Hodson
Warwickshire

Keep your eyes peeled over the summer for developments in the video editing market on the Risc PC. (MM)

Viewpoint

The AKF18 – what a *lovely* piece of kit that was. To be honest, it's one of the nastiest, cheapest monitors I've ever had the misfortune to use, which is why we didn't bother with them at the *Acorn User* office, and went straight for Taxan multisyncs. They work and they're reliable.

The dismal quality of the AKF18 does question Acorn's continued policy of bundling monitors with every machine. OK, it's good to be able to buy a complete kit, but some of us want better monitors. At present, you can buy a Risc PC without a monitor, but only by special arrangement with Acorn, certainly not through a dealer. The AKF85 you can buy with a Risc PC is a badged Philips Brilliance monitor, but it's at the bottom end of that range, and there have been reports of some monitors failing to work consistently, especially in the older, lower resolution modes. Our monitor in the office goes totally mental if you switch to a normal VGA mode, and then change the number of colours (not pixels) on screen. Why? Is it something to do with phases of the moon? It might as well be.

It's interesting how a big part of the typical Acorn user's argument against the price of Apples concerns the fact that Apple sells its Macs without a monitor *or* a keyboard. This adds a considerable amount of cost to the prices you see in the adverts, but some people consider this extra cost to be worth the effort. How many people do you know who have a non-Acorn keyboard attached to their machine? Not that many, I'll bet.

The same goes for monitors. The chances are that almost everyone who owns a A4000, A5000 or Risc PC uses an Acorn monitor, as these machines are (almost) always bundled with one. So, like it or not, you're more than likely stuck with an Acorn monitor and keyboard. This is not good news.

Look at a number of main Acorn dealers, and you'll see that they give you the option of buying a different monitor with your machine. This is because they've 'de-bundled' the monitor, as they know there is a demand for monitor-less machines. It's not just those who already have a decent monitor and want to upgrade their machine, it's also those like David Armstrong who wouldn't touch an AKF18 with a barge pole, and would probably avoid Acorn-badged monitors like the plague. And if there's a demand, surely Acorn could sell more machines if it didn't bundle monitors automatically.

The same goes for keyboards. Although this isn't such a contentious area – you don't often find people complaining about Acorn's keyboards, apart from the moan that the Caps Lock key used to be in the wrong place – it is becoming increasingly important as RSI kicks into the nation's hypochondria. On both the Apple and PC platforms, you can get ergonomic keyboards fitted to your machines that incorporate wrist rests and other stress preventing measures. Apple's top-of-the-range keyboard even splits down the middle, avoiding all those little aches and pains caused by repetitive typing. And on the Acorn... nothing. Zilch.

The sad thing is that once you've established the right marketing image, selling keyboards and monitors becomes a market in its own right. Apple sells a wide range of Apple-badged monitors and keyboards, and you'll find that the vast majority of Apple users have Apple keyboards and Apple monitors, and a large number go for the top-of-the-range models simply because there is a range to buy from. Acorn doesn't have a range as such, just the choice of two monitors in the Risc PC range, and one standard keyboard. You can plug a standard PC keyboard into a Risc PC, but you still end up with a spare keyboard for propping up your table legs.

At the end of the day, it's all down to money, and Acorn makes a tidy sum on its bundled monitors. They're cheap to buy, and profitable to sell, but in some cases the monitor drags an excellent product down with it. Acorn should look into selling machines without monitors. It will make more people upgrade to Risc PCs, as they can keep their existing monitors, and it might even mean Acorn sells more machines. Assuming the *machines* don't start to make crackling noses and give off burning smells...

Mark Moxon

Mouse maintenance

Geoff Preston explains the best ways to take care of those indispensible little rodents.

There can be little doubt that the computer desktop has greatly increased the usability of computers, especially for beginners. An integral part of this user interface is the mouse and for IT Co-ordinators (and technicians if you're lucky enough to have one) this seems to cause more problems than any other piece of equipment bar none. For the user who has one computer and hence one mouse, keeping it running is a simple enough job. I have almost 100 computers across the school and keeping all the mice in proper working order seems to be a full time job.

Cleaning the ball

As with most things, correct maintenance seems to be the key and as far as mice are concerned, this involves keeping the ball and the internal rollers clean. With the Logitech mice currently supplied with Acorn computers, removing the mouse ball requires no tools as the securing plate simply twists off. Unfortunately, the children have also discovered this fact and suddenly you find several mice have stopped working because the balls have gone missing.

For this reason, I resorted glueing the holding plate in position. The best glue for this is Cyanoacrylate (Superglue) but it does need to be done with care so that the glue does not find its way into the mouse. With the securing plate glued into position the ball is now safe from mischievous hands, and it means that to remove the ball you must dismantle the mouse – which is not as difficult as it sounds. First remove the two screws at the front of the mouse and remove the top. The circuit board can now be lifted out and the ball can be removed. I find that washing it with a light cleaner such as Mr Muscle window cleaner seems to work well on the black 'rubber' balls, whereas the white nylon balls from the earlier type of mouse clean up best with Ajax liquid.

Keeping the ball clean is only half the problem. The ball rests on three rollers, one spring loaded and two fixed. The two fixed ones collect a lot of dirt and need to be cleaned. I've tried a couple of products intended to make this job easy, but have yet to find anything that works better than scratching off the grime with your fingernail! If cleaning the mouse ball and rollers still doesn't improve its operation, and assuming it's plugged in correctly, then there is clearly something else wrong.

It seems to me there are three alternatives to fixing faulty mice:

Do-it-yourself repair

The only repair that can be reasonably carried out is cleaning, as previously described. Anything else is just too time consuming to make it worthwhile. I have changed leads, soldered new plugs onto leads, changed the button switches, and even replaced one of the chips on the board. All the repairs were successful but none were cost effective. By the time you've tracked down the part, bought it, paid the postage (which is usually more that the cost of the part), and then sat down and done the job, you won't have saved much. Fiddling with the internal pre-sets (small potentiometers on the circuit board that can be adjusted with a small flat-headed screwdriver) is not recommended unless you know what you're doing as you will almost always make it worse.

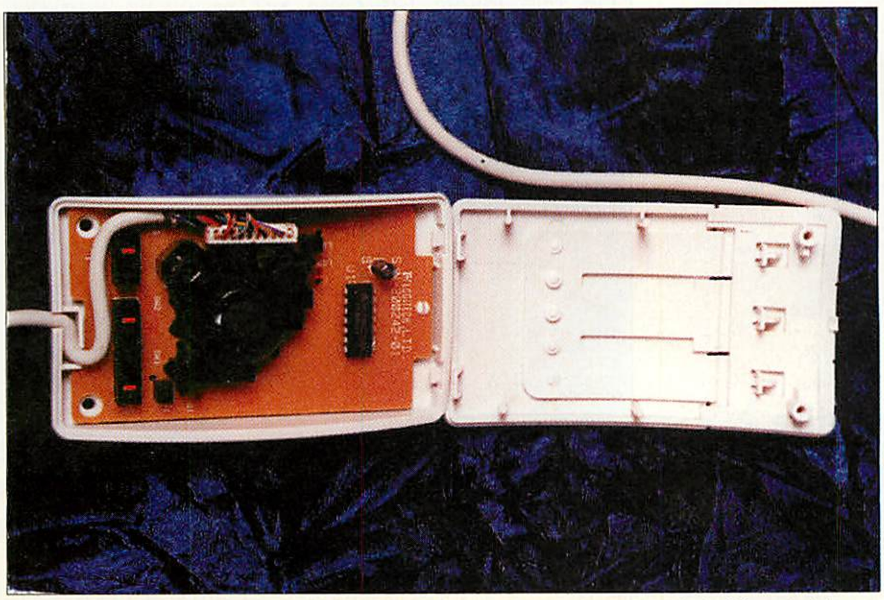
Send away to be repaired

Sending your mouse to your Acorn dealer is likely to incur a charge of about £15 - £20 if it's out of warranty. Even though the cost of repair is almost as much as a new mouse (see next paragraph), this solution should not be dismissed. Some of the older mice are, in my opinion, far more robust than the newer types and it's worth hanging on to them. If anyone knows of other companies who will repair or recondition mice, please let me know. The firm I used to deal with did a great job, but has now decided that it's not a financially viable proposition.

Replacement

There are a couple of options open here. First is to replace the mouse with another one of the same type. At present, SEMERC (0161-0627 4469) is offering grey Logitech mice for £19 each. At that price, it's worth buying a couple for spares. Clares has its own mice for £26 each and very nice they are too, even though the balls seems to pick up more dirt than others. My main criticism is, like the Logitech mouse, the ball is too easily removed. Unlike the Logitech mouse, the securing plate cannot be glued in place as there is no access to the ball from inside the mouse. You may consider alternatives like a roller ball – but in my experience few children manage them as well as a mouse – which although more expensive, seem to require less maintenance. AU

REGAN



New mouse showing two screws and circuit board removed, giving access to the ball from inside.

Building bricks

Colin Rouse looks at some exciting software to use at Key Stage 2.



A sample page from *Optima*.

In this review I have selected some suitable programs for the eight to eleven year age group. The National Curriculum dictates that, at this age, pupils should be extending their IT experience in different ways for different purposes, and should be working with an increasing range of IT applications in a variety of contexts. I hope I am right in assuming that many teachers are already familiar with the popular applications such as *Pendown*, *Artisan* and *Pinpoint* and have left them out of this review. Again, I have not included software I have previously reviewed in *Acorn User* such as *Navigator* or the *Logo* programs, to name but two.

The programs that follow are a very small selection of many that I've used and are varied in content and curriculum applications but all, I feel, meet the requirement that children extend their IT experience in a variety of contexts.

Product: Optima
Supplier: Semerc
Cost: £20 + VAT

Optima is a multimedia package which enables the user to link pictures, text and sound. Children are able to create their own talking books and by linking various pieces of work together, stories, adventures and view data databases can easily be created. One of *Optima*'s main features is its ease of use, with many functions linked to the function keys or menus with simple language and control. Both text and pictures can be moved round the screen or resized and both *Draw* and *Paint* files can be imported. Pictures can be 'dragged' straight onto the page from disc or stored in *Optima*'s picture bank. Here, pictures are compressed and the same picture can be used many times without using extra memory. Pictures can also be saved to disc from the picture bank.

Digitised sound can be linked to pictures or text and by clicking on the object, this can be replayed. There are example sounds contained on the discs and, with the addition of an *Oak* recorder, children's own sound effects can be added. Children can easily create or modify pages, linking them together and adding sound effects to produce a variety of applications. Also available from Semerc is a series of support packs including *Hairy Maclary*, *Our World in Space*, *Scattercat* and *Word and Pictures* priced at under £20 each.

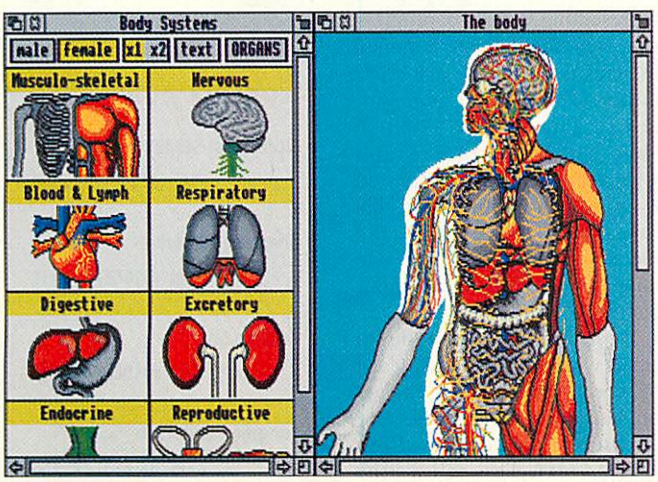
This package has unlimited classroom applications. It is easy to use and the facility to add sound to text can produce some exciting effects. In the multimedia age we now find ourselves in, this program is well-worth considering as an introduction to the creation of multimedia applications in the classroom.

Product: Bodywise
Supplier: Sherston Software
Cost: £39.95 + VAT

Bodywise is an animated database of the human body. Aimed mainly at the top-end of Key Stage 2, pupils can explore the human body by clicking on the part they want to study and watching it work. The system chosen is overlaid onto a male or female body and then a series of labels allows the user to probe deeper into the body through the use of accurate illustrations, informative text and some good animations.

Bodywise illustrations and text can be saved or transferred to other applications and there are also some useful additions. Illustrations can be printed or saved with or without labels, and also in colour or as black outline drawings. The text can be saved as a text file and simply dropped into a desktop publisher or word processing package to enhance pupils' work. All the major systems of the body are covered – eight in all. The package also contains a user manual, a booklet full of classroom ideas, two sets of bodysearch cards and a full set of bodywise study sheets to help children get the most from the software.

This package is all you need to undertake a study of human biology at Key Stage 2. Children find it easy to use and learning is made easy through the use of animation. A full options page allows the teacher to determine how the program is used and monitoring progress is made easy by the option to challenge children to place body parts in the right place. Another stimulating educational package from Sherston which children find



An illustration from *Bodywise*.

fascinating! A valuable addition to any school's health education resources.

Product: Datasweet 2
Supplier: Kudlian Soft
Cost: £40 (Primary site pack – £60)

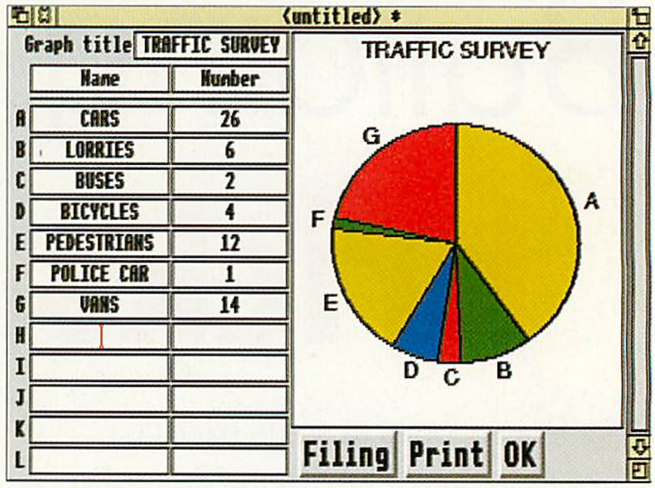
Datasweet is a data handling pack specifically written to meet the demands of the National Curriculum at Key Stages 1 and 2 and is really five programs in one. *Dataplot* is a graph drawing application which can be used on its own or to export data from the other *Datasweet* applications to show information graphically. After entering data, children can then decide to present their results as a bar graph, line graph, line bar graph or pie chart. *Datapick* is a picture-based database that allows children to use key pictures as a way of classifying data. *Datacard* is a keyword-based database that allows up to six keywords to be used from a list of up to 100. *Datafind* goes one step further, introducing the concept of fields within records while *Datacalc* is a small, easy-to-use spreadsheet. It has been designed to enable younger children to enter data quickly into a spreadsheet table. It is the calculating tool of *Datasweet*.

For teachers wishing to have a good set of database utilities, this package is well worth looking at. The simplicity of the programs allows classroom activities to concentrate on the issues of data handling such as structuring and analysis, rather than the complexity of the software; file merging allows children to enter their data on separate machines before collecting all the information together and the interchangeable nature of the package makes it a very useful classroom utility.

Products: Skyhunter, Geordie Racer and Through the Dragon's Eye
Supplier: Longman Logotron
Cost: £25.50 each

Following the recent *Earthwarp* review in *Acorn User*, I've decided to include three more titles from the series in this review. Based on the popular BBC television programme *Look and Read*, these three software packages supply curriculum support in a variety of ways. Each package consists of: the program disc and a very useful manual containing information about each of the problems encountered on the disc, suggestions for follow-up work, useful addresses and, in some cases, National Curriculum correlations. Aimed at the seven to nine age group, the *Look and Read* programs are designed to stimulate an interest in reading as well as aiding language development. The supporting computer software follows the original *Look and Read* story, offering a variety of activities to enhance and extend that development.

Using these programs in the classroom, I have found them to be stimulating and well thought out, building on the interest created by the television programme and aiding language development. If you use the *Look and Read* series they are worth considering.



KudlianSoft's *Dataplot.*



A problem from *Geordie Racer.*

Product: Pictogram/Word library
Supplier: Kudlian Soft
Cost: £20 + VAT

This is another good utility package from Kudlian Soft and two programs are contained on this disc. *Pictogram* is an application that teaches children how to use graphs for representing data in a progressive way. Pictures are arranged in stacks and can be displayed either vertically or horizontally. The graph can be switched to a block graph where the pictures are replaced as more abstract blocks of different colours. Finally, the blocks can be joined into one long bar to create the familiar bar chart.

Word Library provides a small window containing a list of words which, when clicked on, will be entered into any desktop application which accepts text. This allows the creation of wordbanks for any curriculum area and for general classroom use. I could see particular uses for this application in the field of special needs.

Conclusions

I have looked at a wide variety of software that have relevance at Key Stage two. Many of these packages are good but limitations of space mean that it can't all be reviewed here. As I stated in the first part of the review, the best way to evaluate any software you are considering purchasing is 'try before you buy.' Many of the more reputable software houses offer an approval scheme for schools. Ask yourself the question, 'How does this software package improve the quality of learning in my classroom?' If you can answer this positively, then consider buying the package. Good Hunting! AU

Contact point

Northwest SEMERC
Tel: (0161)-627 2381

Sherston Software
Tel: (01666) 840433

Kudlian Soft
Tel: (01926) 851147

Longman Logotron
Tel: (01223) 425558

A teacher's

Nothing gets to a teacher more than writing all those school reports. Fred Grieve reveals how a little initiative put paid to all that paperwork.

Several years ago, my school was selected to participate in pilot schemes for both Profiling and Records of Achievement. As both schemes generated piles of paperwork for the hapless classroom teacher, I decided to use IT to try and reduce this workload to more manageable proportions.

Many, many years ago, I decided to use a database for all first-hand recording. The marks or grades of every student I teach are recorded in my departmental database. From the outset, I always envisaged that the next step would be to output these records for report generation, but this was something which could not be done at that time due to the limitations of existing hardware and software. With the advent of cheaper laser printers and DTP packages which can mail merge, the final hurdle was finally overcome.

Database requirements

I use *Squirrel* for keeping track of students' progress, although other databases such as *KeyPlus*, *Advance* and *DataPower* could be used – it should not be assumed, however, that any database will work. Like all systems, the school reporting system is ever-changing, so it is important to use a database which permits the addition and deletion of fields. Another consideration is whether the database can export data in CSV file format as this is preferable. CSV file exporting is necessary for both the entire file and for a subset of it.

When exporting the contents of a database as a CSV file for mail merging purposes, it is helpful to have the headings option selected (see fig. 1).

Table 1 shows a typical CSV file which has been exported, with headings selected. If headings are not selected the field names will not be saved as part of the file, i.e. the first line in table 1 will not be present in the CSV file.

Note that the non-numeric data for each field is held in quotes and each field is separated by the comma. Each record is separated by the new line character and I have inserted the ¶ symbol in order to make this clear. Please note that ¶ is not part of the CSV file.

To add headings to an exported file, load the CSV file into *Edit* and enter the field names. The sequence you type in field names should be taken from the order the data appears in the file. Be sure to wrap each field name in quotes and separate different fields with a comma – this is most important. Re-save the file and you ought to be ready to mail merge.

Mail merging

Both *Impression II* (from version 2.14) and *Ovation* (from version 1.30) can be used for mail merging. Mail merge has been revamped in both *Impression Style* and *Impression Publisher* and is now covered in more detail in the user manuals. *Acorn Advance* uses a virtually identical method of mail merging to *Style* and *Publisher*.

In any mail merge operation, the user must create two files: the standard document and a data file. As many mail merges obtain the data file from a database, not surprisingly, the embedded references to data in the standard document are commonly referred to as fields. The data file simply contains all the data the user needs to print out (the CSV file exported from your database).

The standard document contains all the layout information, graphics (where applicable) and text. Very importantly, it must also contain embedded references to the data which have to be read in to the standard document prior to printing. Our school report form is an A4 sized, pre-printed piece of stationery on which teachers must complete quite a number of different fields before signing and dating it. I recreated this report form using *Impression*. Our school logo was scanned at 300dpi, saved as a sprite file, and pasted onto the standard document. The embedded references for the student name, registration class, computer class, etc. were finally added.

In order to do this using *Impression Publisher/Style* or *Acorn Advance*, the cursor must be placed at the point where the field is to appear in the standard document. To paste the data into the standard document, open the Utilities menu and select start mail merge. A dialogue box should now appear.

If the CSV data file was saved without headings, be sure to select 'ignore headings', then drag the CSV file onto this box. The headings sub-menu will now activate and you will be able to access the field

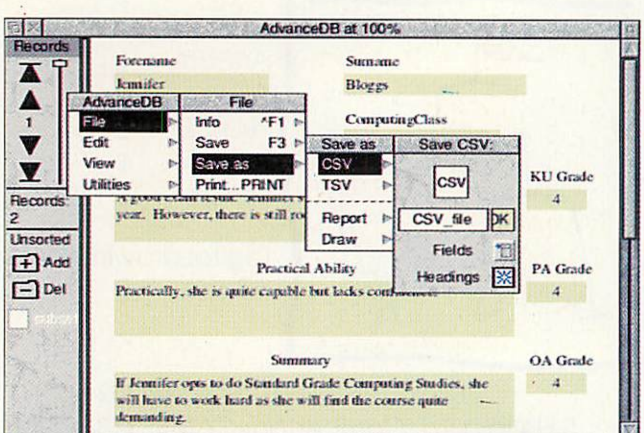


Figure 1 – any database must be able to export text as a CSV file.

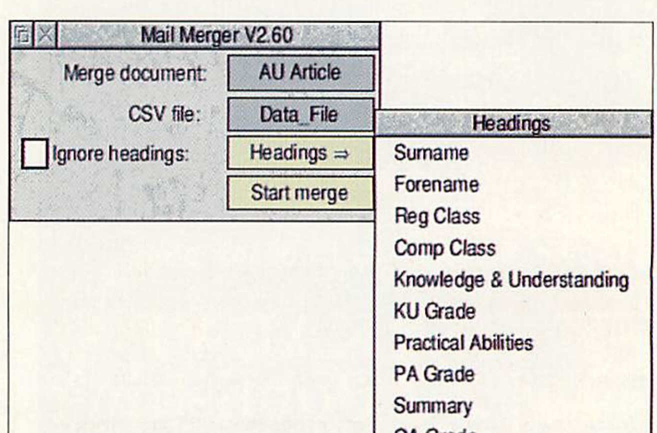


Figure 2 – Mail merging using *Impression* or *Advance*.

nightmare

Table 1

'Surname','Forename','Reg Class','Comp Class','Knowledge & Understanding','KU Grade','Practical Abilities','PA Grade','Summary', 'OA Grade.'¶
'Bloggs','Jennifer','2.4','2S1','A good exam result. Jennifer's written work has improved this year. However, there is still room for more improvement.','4','Practically, she is quite capable but lacks confidence.','4','If Jennifer opts to do Standard Grade Computing Studies, she will have to work hard as she will find the course quite demanding.','4'¶
'Bloggs','Joseph','2.1','2S2','Joe's attention to detail is very poor and this cost him valuable marks in this exam.','6','He obviously enjoys the practical side of Computing Studies and this is reflected in this grade. Well done!','2','A more careful approach is needed when answering written questions. Joe's practical work is very good – keep this up.','4'¶

names (see figure 2). Clicking on a heading (field name) with the select mouse button will paste that field to the cursor.

If the CSV file was saved with headings, the field name will appear in pointed brackets thus, <Surname>. Any field may be used more than once and, as the merge information is treated as text, any mail merge field can have styles applied to it.

For those who use *Ovation*, the standard document is set up in exactly the same way as in *Impression*. The embedded field references commands are accessed by pressing <CTRL> <I>. The ensuing dialogue box simply asks for a number which refers to the order of the field in the CSV file (in the example in figure 2, Surname is 1, Forename is 2, etc.). One drawback with this method is that once the command has been entered into the dialogue box and set, it appears on the standard document in square brackets in the form [MERGE n] and does not show the field name. Again, like embedded references in *Impression*, *Ovation*-embedded commands can also have styles applied to them.

Printing

Once the standard document and the data file have been set up and saved to disc, printing can take place providing a RISC OS printer driver has been loaded.

Impression/Advance Users

With *Impression*, open the Utilities menu, select the Mail merge option, drag the CSV data file in (as before) then select Start merge. The standard document will now alter to show the completed information for the first record. If you want to check everything prior to printing, it is now possible to step through every record by clicking on the 'Next' icon. To print all records, select 'Print all records' then select 'Print' and off you go.

Ovation Users

With Ovation, press the Print key and when the print dialogue box opens select the mail merge option, then drag the CSV file into the merge file icon on the bottom line (figure 3). You are now ready to begin printing.

And finally... with regards to the dating and signing of reports done in this manner, those readers who still use Impression II may be interested to know that it has a further merge command. Place the cursor on that part of your report standard document where you want the current date to appear and open the Utilities menu. Select the Merge command option and enter :Importer GetTimeDate and press Return. This command provides a dynamic link to your computer's real time clock, so every time that standard document is mail merged, the current date is automatically inserted. Unfortunately, this command appears to be no longer supported in Mail Merger 2.60, the version currently supplied with both Style and Publisher, so those users will have to make do with Shift-Ctrl-D which pastes today's date at the cursor.

A further development could be to scan your own signature at a fairly high resolution and paste that at the foot of the report document. AU

Author's Footnote

Mail merging student reports like this necessitates the printing of several dozen, if not several hundred A4 pages in one session. Because of the number of copies involved and the need for good-quality printout, I do not believe this should be attempted using anything other than a page printer.

Product details

Squirrel 2	£129 + VAT	Digital Services Ltd†	(01705) 210600
KeyPlus	£60+VAT	Anglia Television	(01603) 615151 ext. 2445
DataPower	£149 + VAT	Iota Software Ltd	(10223) 566789
Advance	£88+VAT	Acorn Computers	(01223) 254254
Ovation	£69+VAT	Beebug	(01727) 840303
Impression Style	£99+VAT	Computer Concepts	(01442) 63933

† At the time of writing, Digital Services had ceased trading – however *Squirrel 2* may still be available from dealers

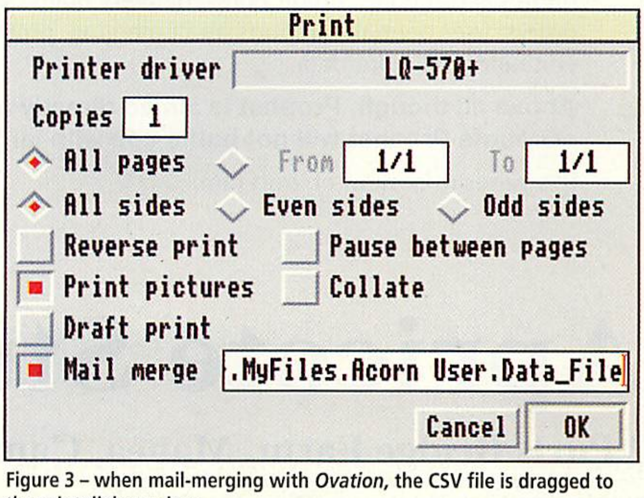
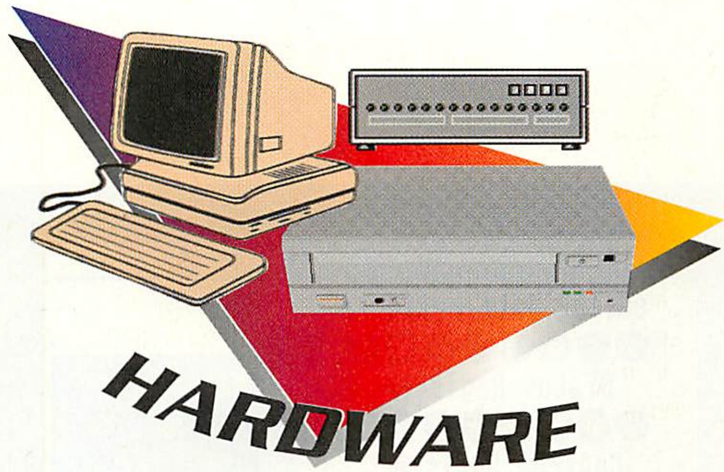


Figure 3 – when mail-merging with *Ovation*, the CSV file is dragged to the print dialogue box.

Run the RISC



Mike Cook joins us with a continuation of Acorn Computing's popular Body Building articles.

As a refugee from *Acorn Computing*, it is interesting to be writing in, what is for me, a new magazine. I realise that, at first at least, I have two audiences out there – the ones who know what I am about and those who have never read my work. For the latter, let me introduce myself. I have been writing for 'the other lot' ever since the magazine started and had something published in every issue. My major work was the *Body Building Course*, a series which eventually ran to 140 articles. Why the name? Well, the initials stood for BBC which was the computer I started writing about. When that computer faded, the name stuck! Also the articles were about building; not the civil engineering type but electronic construction to attach to a computer.

Now electronics are 'in my blood' and writing these articles is a good way to support my habit, but as time goes on and computers advance, there is a wider range of computer applications than ever before. So in these pages I want to look not only at electronics and computer hardware, but also at an increasingly wide range of computer activities.

To start with I would like to give my new friends a chance to catch up with the world of computer interfacing by looking at the fundamentals of input and output on today's computers.

The good old days

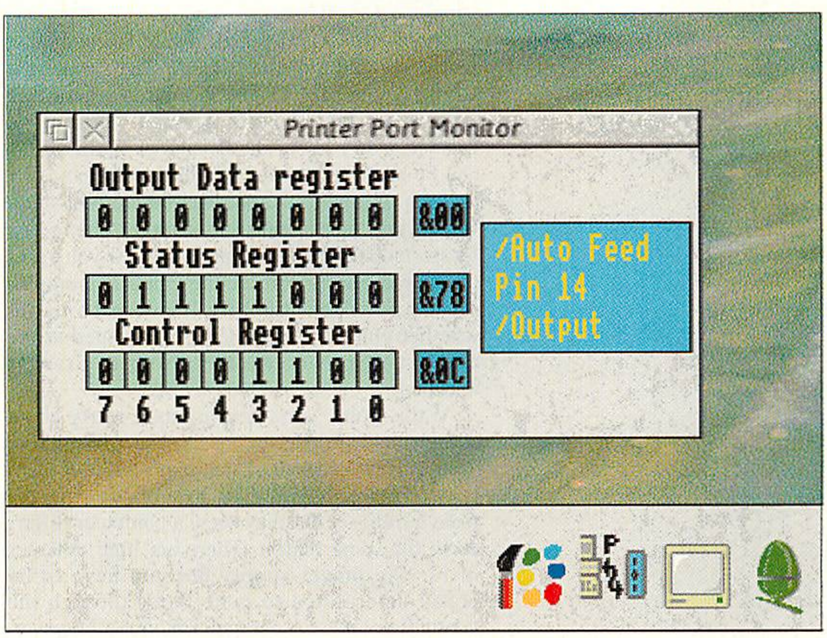
In the beginning life was simple. We all had the same computer, the BBC model B, and it had a user port. This allowed us to connect all sorts of equipment to our computer and provided the fundamental input and output signals needed for the computer to reach the outside world to control and sense events. There were eight input/output lines and two edge-detecting inputs for handshaking. Mind you, not every one knew the facility was there, some people simply referred to it as 'that plug next to the printer port that you bend the pins on when you try to connect the printer in a hurry.' As time went on there were more models, but all had a user port, even though it was particularly well hidden on the Compact.

When the New Age dawned with the introduction of the first RISC computer, the A310, the user port was only an optional extra. This meant you couldn't connect equipment on a whim: you needed to make a substantial financial investment before you could get started. However, it was still convenient to concentrate on the user port, so it was possible to do a project with both generations of computers.

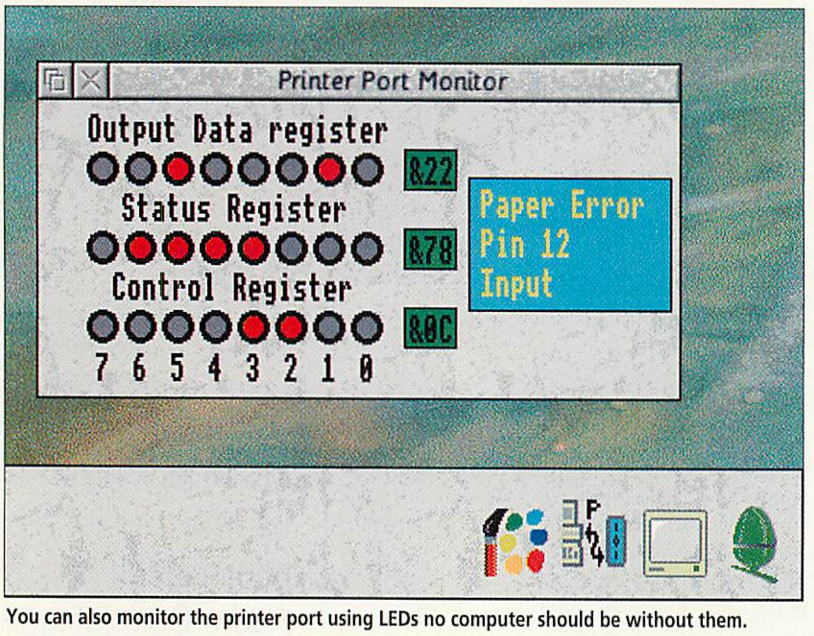
The printer port

Today we find ourselves in a similar situation: the new machines have become old machines and a fresh generation of Risc PCs have arrived. But from the interfacing point of view, there is another division and that revolves around the printer port.

The original RISC machines were fitted with a one-way printer port, that is, most of the signals were outputs with two handshaking inputs. Then, with the introduction of the A5000, a new set of computers emerged – those with a bi-directional printer port. This means that the eight outputs to the printer could also be made to act as eight inputs. This is not as flexible as the old user port because on that you could make any of the bits an input or output, so could



The printer port monitor program showing output on the parallel port.



You can also monitor the printer port using LEDs no computer should be without them.

mix them as you like. However, the new bi-directional port also has some extra inputs and outputs designed for a more complex handshaking system. In fact there are four extra outputs and five inputs so, all in all, there are 17 lines we can use. This sounds like an improvement over the 10 on the user port, but there is a price to pay.

One of the great advantages of the user port was that it had a five volt power supply connection. This made it simple to attach all sorts of devices because you could power them directly from the computer. The printer port has no provisions for a power supply so we have to extract the power from somewhere else. Occasionally we can use the minute amount of power provided by the unused outputs, but if there are any serious electronics we have to use an external supply.

There are several places inside the computer where we can tap power from. The simplest is from the podule expansion boards where five volts is available on row A, pin 1. There is no need to worry about the 0 volts or Earth as this can be taken from pin 25 of the printer port. It's on a lot of other pins too, but you are best sticking to just one because this might change on future models. In fact, some of the 0 volts pins on the old printer port are the inputs and outputs on the new one. Luckily it doesn't matter whether you have any podule cards fitted as the amount of power we are going to draw is minimal.

At this point some people might worry about dangerous voltages being exposed. Well five volts is less than half of that exposed in an electric train set. Nobody worries about voltages from a train set but they view a computer differently for some reason. There are high voltages inside the power supply but you have to be pretty determined to poke wires through the ventilation holes. A computer monitor, however, is a very different matter – you can get lethal voltages inside one even days after the thing has been unplugged.

Accessing ports

Another aspect about the user port was that it was easy to access. All you had to do was directly address a certain range of memory locations – &FE60 to &FE6F. (By the way if you are not familiar with hexadecimal numbers keep reading and I will explain all next month.) In theory, accessing the printer port should be just as simple, only using different addresses. Alas, RISC computers are more sophisticated. They run in different modes and, in the mode BASIC runs, the processor will not allow you to access the range of memory locations that correspond to hardware devices including the printer port.

In order to access the printer port you have to be in the Supervisor mode, a trick you can only pull from within a piece of machine code. To make matters worse, the actual address of the printer port changes depending on which model of computer you have. However, to the rescue comes RISC OS 3.1! This provides some system calls which allow you to access the printer port. It is a lot slower than accessing them directly, but for most of the time it's fast enough.

This is where Acorn could have made life easy in the compatibility stakes. The system call could have accessed both the old printer ports and the new bi-directional ones, but no! If you try to use these calls on the older machines you get an error message telling you that you have an 'Incompatible hardware configuration' which is plain nonsense if you just want to output stuff.

Fortunately, the operating system is flexible enough to compensate for Acorn's short sightedness. What we can do is write a module that replaces the original system calls with new ones that will access the old printer ports. Then we need to load it into older computers so that any software that accesses the printer port can work on both types of machines. Writing the module is especially easy, because when the code is entered we are already in the supervisor mode so we don't have to go through the tedious business of 'mucking about in hyperspace.' (It helps if you have read the *Hitch Hikers' Guide to the Galaxy.*)

When I say 'we' here I really mean me! I have written the module to make the *Parallel_Op* call behave like the new hardware as much as possible on the old hardware. Of course, it's not possible to simulate all the extra inputs or outputs, or to make the port lines inputs, but in all other respects it behaves in the same way. The format of the *Parallel_Op* is in the *Programmer's Reference Manual*, but if you don't have that then fear not, I shall be covering it in detail when we come to use it.

What the module does

What my module does is make the best stab at returning sensible values given the limitations of fewer handshaking lines. For example, when you read the status register, the *Busy* and *Ack*(knowledge) lines are in bits six and seven of the returned value. In the old machines, these

two lines are both in bit 0 at two different addresses. The module also returns a value when you ask to read the data register, despite there being no way to actually do this. The reason for reading the data register when it is only being used for outputs is so you can alter just one bit and leave the others unchanged. So my module simply stores the last byte written to the printer port in memory and returns it when asked to read the port.

The one thing not simulated is the control register. In theory it would be possible to use the strobe output on the old machines – however, it is not all that safe to do so. This is because the address of that output on the older machines also controls the floppy disc controller and there is no hardware to read that address. Therefore, you could set it in one state and the next disc access would reset it. Also, the act of setting it could interfere with the workings of the disc controller, so all the module does here is to return a value of &FF. For those of you who are interested, the source code is on this month's cover disc.

Armed with this module, we can start to write interfacing routines that will work on all RISC machines, hence the name of my new column.

Removing bugs

When you are doing a hardware project you have to worry about both the hardware and software, so any mistake is doubly difficult to track down. First of all you have to find out if the error is in the hardware or the software. To that end, it is useful if you have a piece of diagnostic software that can be used to check out the hardware. But this is a chicken and egg situation as you can't check out the hardware unless you know what it is.

To the rescue comes the Desktop environment. What we need is a piece of software that can monitor and control every bit of the printer port and, as if by magic, we have one on this month's cover disc. Actually, it was not all that magical to write and took me quite a while, but it allows you to test and set every bit on the printer port – and is called, rather unimaginatively, *!PortMon* (Port Monitor). Thanks to my module it will work on all machines. Now I must confess that I wrote it originally for the Risc PC but the techniques I used meant it could go almost unchanged onto the old Archimedes series. I say almost because as well as having a display of the state of the bits, it also tells you something about the bit you are pointing at – in a small rectangle when you move the pointer over it. This had to be modified for machines with fewer handshaking lines.

The application uses the 'system calls' to read the registers and then displays what it reads. If you click on a bit it inverts it and then writes the new bit pattern back. However, it reads the registers again for the updated display, therefore if you click on a bit and it doesn't change it isn't an output.

One final point here. Some of the handshaking lines have a bar across them like this: busy. This means the line is at a logic zero when the printer is busy. So the bar means a logic false makes the name true. If the line was labelled just 'busy' then there would be a logic 1 on it when the printer was busy. In some circumstances it's a bit inconvenient putting a bar over a word, so I have used the other convention in the monitor program's information window – the word starts with a / (slash) to indicate it should have a bar over it. However, you will also see a slash in front of the word input or output on some signals. This is because the hardware introduces an inversion.

For example, on the /busy line, if you put a logic zero on here you will see a logic 1 appear when you read the bit. This is called an inverting input. Similarly you can have inverting outputs. With these you write a 1 to the bit and get a zero on the output. I could have simply inverted the bits in the software so that you saw what you got but this would reduce the value of the monitor, which is to allow you to make up the exact bit patterns you are sending to the registers in your program.

However, you can easily see if a line is an inverting one by simply looking at the information window as you click on it.

Being of the old school of computer interfacing, I think that no computer is complete with out a row of flashing LEDs. Therefore, the display on *PortMon* can be changed from 0s and 1 to LEDs that wink on and off – the option is in the icon bar menu.

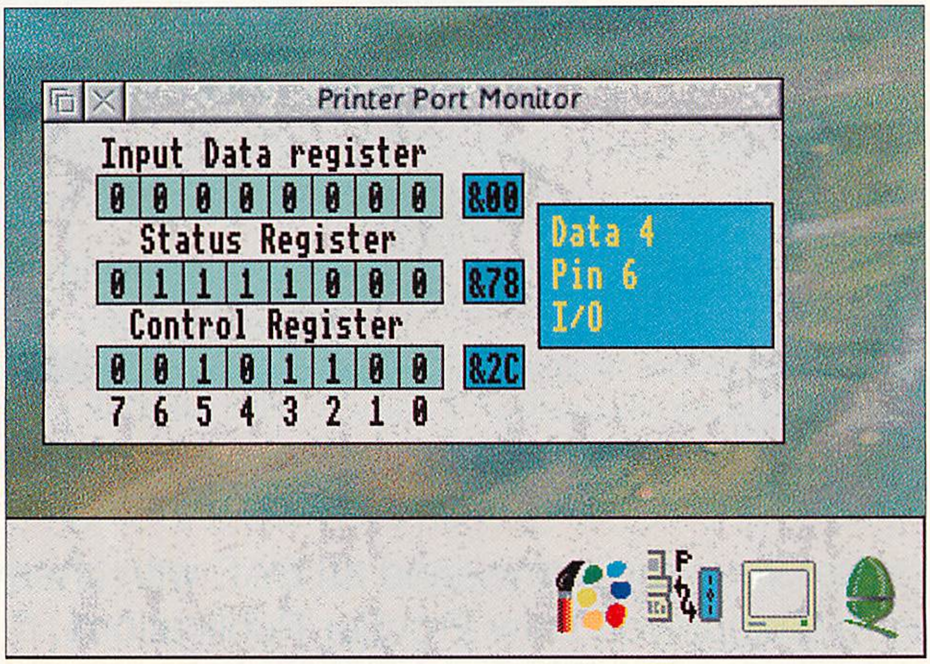
Well that about wraps it up for this month. Join me next month when we tackle the hardware end of connecting things to the printer port. AU

Files on the disc

The *PortMon* program mentioned in the text is on the cover disc of this issue of *Acorn User*. The program is in the *MikeCook* archive on the disc, and is copyright Musberry Consultants.

The program allows you to monitor and indeed change the status of the bits on the printer port. It works both on the newer machines with bi-directional printer ports and on the older machines thanks to a cunning module *Mono_D*. The source code for this module is also supplied on the disc, in the BASIC program *PportMod*.

When the program is run, it installs on the icon bar. Clicking on the icon opens a window showing the status of the printer port. The value of any of the bits can in principle be altered by clicking on them, but note that the value will only change if you have clicked on an output. The display can be either binary (ones and zeroes) or LEDs.



You can also read data from the paralel port if you have a modern Acorn machine.

Questions & answers

How to learn to program your Acorn and printing to other printers using a TurboDriver cable.

Q I am interested in writing programs for the Archimedes. Often we are told how easy the machine is to program, but even having followed the BASIC tutorial in *Acorn User* I am finding it hard to write programs that do anything useful. I am particularly interested in writing programs for the Desktop – is this possible in BASIC, or should I be using some other language like C?

I would be extremely grateful if you could help me, or at least point me in the direction of a book that would be useful on the subject.

D Griffin
Carlisle

A This is indeed far too large a subject to cover in these pages, but I can certainly recommend a number of books which would probably be useful.

Firstly, it is not clear whether or not you are confident with the BASIC language. If you are not, then Sigma Press, (01625) 531035, has a book *Programming Acorn RISC OS Computers* which is exactly right for you. This covers all aspects of the BASIC language in detail, and is a good tutorial introduction to the subject. It also has a useful alphabetical list of BASIC keywords with examples of their usage in an appendix. However, the book stops short of describing how to program the WIMP, so if you are already familiar with BASIC there is no real need for this book.

Similar comments apply to the *BBC BASIC Reference Manual* from Acorn, (01223) 254254. This is a more formalised account of the BASIC language, and is not really a tutorial. However, as a work of reference when you are trying to remember exactly which parameter goes where in the INSTR command, it is very useful. In this respect it goes into much more detail than the Sigma Press book.

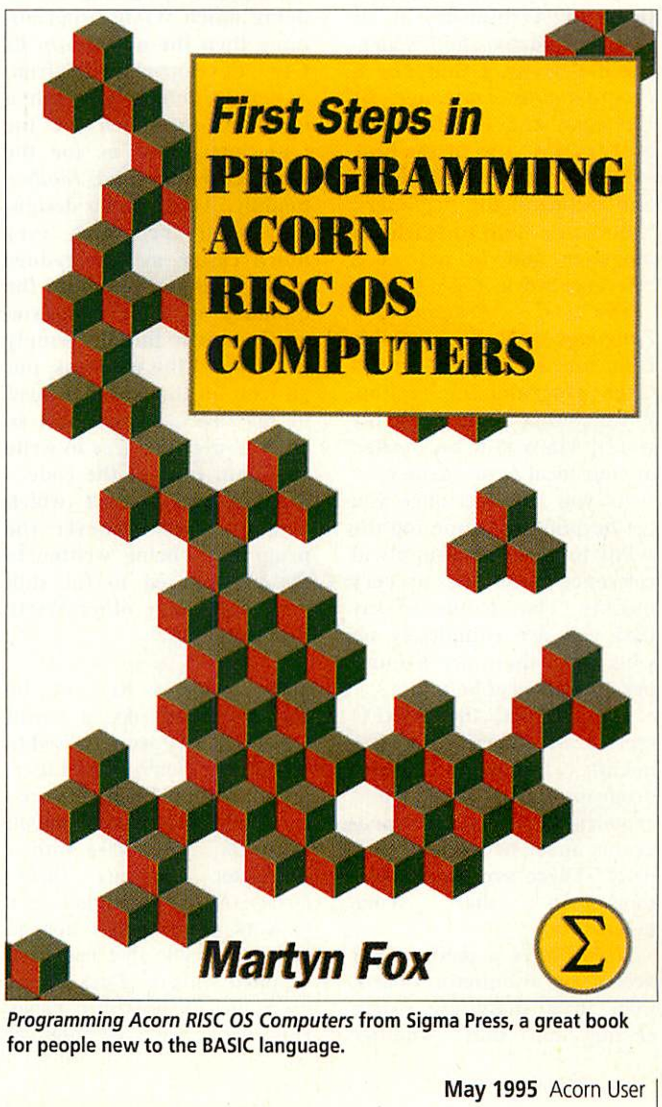
Neither of these books will teach you much about programming the WIMP, or about other interaction with the Archimedes operating system. For that, you will need to get hold of one of the other books on the subject.

The 'seminal' work on WIMP programming is published by Acorn and is called the *Programmer's Reference Manual*. If you are writing anything more than a simple Desktop program I would seriously advise that you consider saving up for it. At £99 it is not cheap, but it will tell you everything that you could ever need to know about writing RISC OS software.

The *PRM* comes in five volumes – the fifth is recent and details the changes in RISC OS 3.5 on the Risc PC – and is laid out as a work of reference. Learning programming from it is therefore a bit like trying to learn French from a dictionary. All the information is there, but not in the order that a beginner needs. What is required is for someone to take the information and present it in the order that you actually need to know things.

Dabs Press, 0161-773 8632, has done more or less this with Alan Senior's *Basic WIMP Programming on the Acorn*, which is an excellent clear guide to programming the WIMP from BASIC, and comes with a disc full of useful routines and examples.

Beebug, (01727) 840303, publishes a book *WIMP Programming for All* which covers much the same ground. Sigma Press's *A Beginner's Guide to WIMP Programming* by Martyn Fox – who wrote the beginner's book as well – is sadly now out of print, but may still be available from



Programming Acorn RISC OS Computers **from Sigma Press, a great book for people new to the BASIC language.**

dealers. All three are highly recommended, and will set you well on your way to writing BASIC WIMP programs.

Although BASIC is more than adequate for programming Desktop applications, you may for reasons of speed or convenience wish to use another language. The BASIC language has a built-in Assembler for writing fast machine code routines, and there are numerous other Assembler applications on the market, including some excellent Freeware ones. Dabs Press publishes the only book worth considering for learning Assembler – *Archimedes Assembly Language* – which includes a short, slightly outdated, but useful section on programming the WIMP.

C fares less well on the Acorn. Dabs Press's *C: A Dabhand Guide* includes only a single chapter on programming in C on the Archimedes, and there is no other C reference book that mentions the Archimedes at all. Of the many non-Acorn-specific books, I find *The C Programming Language* by Kernigan and Ritchie – the authors of C – to be the best. While it may be a little dry and technical for beginners, it does aim both to teach the language and to act as a reference work.

The C Programming Language will be available from any booksellers with a large programming section, but the other books probably won't. Many will be stocked at your local Acorn dealer.

As you can see, once you get beyond programming the WIMP in BASIC, the supply of reference books dries up very quickly. That is not to say that you are completely on your own; there are a number of sources of help.

For a start, the *INFO section of *Acorn User* frequently publishes useful programming tips, and encourages readers take programs apart to see how they work. There are similar sections in other Acorn magazines.

If you have a modem and access to a bulletin board, then it is definitely worth asking on that whether anyone can help. Most bulletin boards have at least one area devoted to a clinic for users' programming problems. Local clubs and user groups will also help with this – there is no better way to learn programming than by talking to someone who has already solved all the problems that you are encountering and made all the mistakes that you are making. If you have Internet access, subscribe to the new Usenet group comp.sys.acorn.programmer, which has been set up especially to deal with people having problems programming the Archimedes.

Also, never ignore the example programs that come with development environments such as *Easy C* and *Acorn C/C++*. Look at their source code, alter the programs and see the effect, read the comments, doing all of this will help you learn how WIMP programs work.

If you are going to be doing much WIMP programming then the new *Acorn C/C++* developer's kit from Acorn is definitely worth a look, not so much for the C++ interpreter as for the resource editor and *Toolbox* module. These make designing WIMP programs very much easier, as they reduce to an absolute minimum the quantity of code that you need to write initially simply to drive all the windows, put an icon on the icon bar, load in messages, sprites and so on. You are then free to write the main part of the code – the interesting part which actually does whatever the program is being written to do, as opposed to the dull part that every other WIMP program does.

Advice Given

The problem in the March issue about the unresponsive A-Link prompted a couple of helpful replies via e-mail. Paul Relf (pgr1@ukc.ac.uk) wrote:

'From using *PocketFS 2* on my A540, I have noticed that the translation/filer window will not appear if *ArcFS 2* is loaded and has the ImageFS setting set to on on the Options dialogue box. Ticking this off removes the problem.

'A change will need to be made to *PocketFS* to allow it to coexist with *ArcFS 2*. You can still access the root directory, and from there the whole Pocket Book directory structure, as the link itself is actually active.

'There appears to be a clash between *ArcFS* using the image filing system and *PocketFS* trying to do the same.'

Matthew Wilcox (mrw103 @tower.york.ac.uk) adds:

'We had the same problem as this and thanks to e-mailing customer services, eventually tracked the bug down to *ImageFSFix* 0.10 & 0.11 (the *ArcFS* version). Mark Smith knows about the problem and is working on it.

'For the meantime, either comment out the line in the *ArcFS* run file which loads *ImageFSFix* or replace the copy of *ImageFSFix* inside the *ArcFS* application with the David Pilling version in *SparkFS*.'

Q I have a Risc PC on which I do a small amount of DTP work. I used to output solely onto an HP LaserJet printer but, feeling the need for a little colour in my output, I bought a BJC-4000 with a Computer Concepts *TurboDriver*. At first I couldn't get it to work at all, until I stopped using the cable that had been supplied with the DeskJet and used the *TurboDriver* cable. However, the *TurboDriver* cable wouldn't work with the DeskJet; it printed gibberish.

Is there any way of using the one cable for both printers? I don't mind swapping the cable at the printer end – both printers are easily accessible – but swapping it at the computer end is awkward as my computer is tucked under my desk. Besides, swapping printer cables tends to make the dongle fall out.

J Page
Chippenham

A The cable supplied with the *TurboDriver* has its data lines in a non-standard order. This means that if anything other than a *TurboDriver* tries to print down the cable, or if a *TurboDriver* tries to print using another cable, all the data comes out scrambled. The main purpose served by this is one of software protection – it is harder to wire up a custom printer cable than to copy a program disc.

However, using other printer drivers with the *TurboDriver* cable should not be a problem, as there is a module loaded in by the *TurboDriver* which 'unscrambles' the data lines in the cable. In older versions of the *TurboDriver* software this was the *Turbo* module, but in the latest versions – which since you have a Risc PC I assume that you have – it is the *PrintQFS* module. This resides within the *!CCShared* directory in the *!System* folder if you wish to load it in your boot sequence, but it should be loaded in anyway whenever a *TurboDriver* is the current printer.

Assuming that you have set *Printers* up to have both your HP DeskJet printer driver and your BJC-4000 *TurboDriver* active on the icon bar, and that you toggle between them as needed, set *Printers* so that the *TurboDriver* is always loaded as the current printer. The simplest way to do this is to click once on the *TurboDriver* icon and then 'Save choices'. You will then be able to click on the DeskJet icon, with the *PrintQFS* module still in memory to unscramble the data lines on the cable, and the DeskJet printer driver should then print perfectly using the *TurboDriver* cable.

Another solution of course would be to get the *TurboDriver* for the HP DeskJet, which CC also sells. Then you would have no trouble at all printing down the cable.

Contacting us

You can contact the Problem page by writing to: Q & A, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield, SK10 4NP or by e-mail to qanda@acornusr.demon.co.uk. AU

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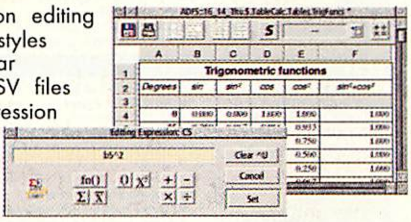
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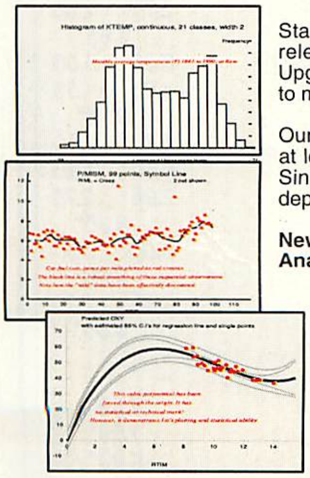
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Absolute beginners

Last issue David Matthewman explained how to point at things using the mouse. This issue he explains what you are pointing at.

The Desktop (see last issue) is a WIMP environment. The acronym is not meant to imply any lack of power, but stands for Windows, Icons, Menus, Pointer – the elements that make up the Desktop. I shall say a few words on each in turn but they will be examined in more detail over the next few issues. The intention here is to familiarise you with the terms – jargon busting, in essence.

Windows

A *window* is a rectangular area of the desktop 'belonging' to a particular program, or filing system. That's what it is from the point of view of the computer, at any rate, but what about from the point of view of the user?

Most windows look something like figure one. This particular window is displaying the contents of the hard disc on my Risc PC. It is fairly typical in many ways: it has a bar across the top called the title bar which not only gives the window a 'name' but also allows it to be moved around the screen, it has a bar down the right hand side to scroll the contents of the window, it has various little widgets round the side to close it, change its size and so on, and it has a large area displaying its contents. The last of these – the contents area – is the one that changes the most. It could be displaying files and directories on a disc, text in a word processor, a picture in a painting package or entries in a database.

You can have several different windows on screen at once. Where they overlap the window 'in front' will obscure the window 'behind' – fairly obvious behaviour. What is perhaps less obvious is that any of the visible parts of the windows are accessible, whether the window is at the front or not. Figure two shows this – here a file has been highlighted with the mouse even though most of the window has been obscured by other windows.

Windows are usually referred to by the program that opened them. In the case of a window displaying the contents of a disc, this was opened by the Filer – the program in the operating system that handles disc activity – so is called a Filer window.

Icons

An *icon* is pretty well any individual object on the desktop. It can be a graphic, a line of text, or a combination of both. The small pictures representing the disc drives, programs and so on which are on the strip along the bottom of the Desktop are icons. The little square tools around the edge of a window for re-sizing and scrolling around it are icons. The lines of text in the information box of an application, the tools on the *Impression* tool bar and the buttons in a choices window: all of these are icons.

Text in a word processor and graphics in *Draw* and *Paint* are *not* icons. Generally speaking, an icon is a single, well-defined object with a fixed size, or represents a particular action – a noun or a verb, if you like.

Generally, icons are referred to either by the object they represent or by the action performed by clicking on them with Select (see last issue). Hence we can have an *Impression* icon on the icon bar at the bottom of the screen or in a Filer window, one of which refers to the program in memory, the other to the program on disc. Windows have close, re-size and scroll icons, which all refer to the action of performing various operations.

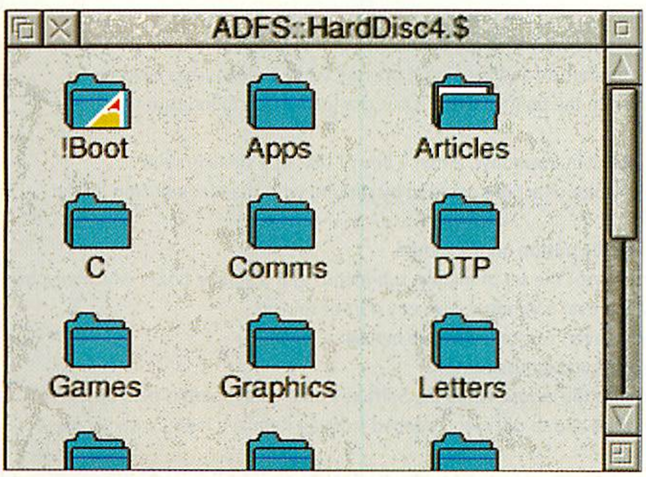


Figure one – a typical window. The main area changes from application to application, but the graphics round the edge are standard.

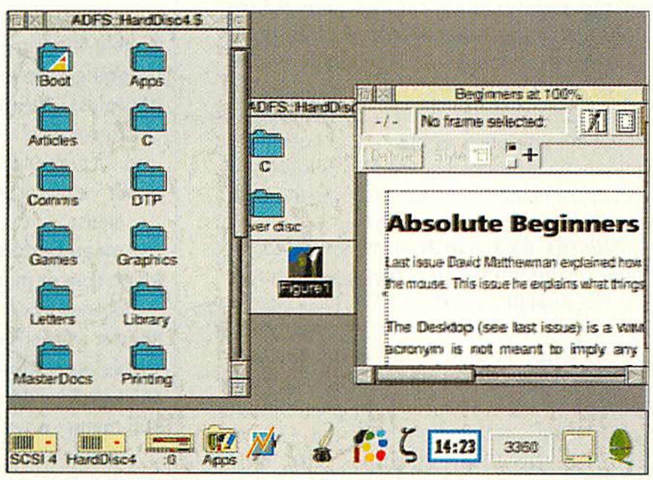


Figure two – the file *Figure1* has been highlighted, even though the window containing it is at the back of the stack of windows.

Menus

A *menu* is the name given to the structure that usually appears when you click with the Menu button over a window. The standard menu is a list of text entries representing some action the user might want to perform – saving a file, changing text to italics, selecting a colour – often with an arrow to the right of the text leading to a further menu called a *sub-menu*. The arrow may also lead to a window which allows more flexibility about what information is displayed; such a window is called a *dialogue box*. The menu and its sub-menus and dialogue boxes is called a *menu tree* or *menu structure*.

Figure three shows part of the menu tree for the program *Impression Publisher Plus*, with a menu, sub-menu and dialogue box. Note that the menu item 'Tool bars' is ticked, which indicates in this case that one or more of the *Impression* tool bars is being displayed.

Unlike some other systems, the menu stays on screen even after the Menu button has been released – in fact, it is best *not* to hold the button down while you move through the menu. Sub-menus are opened when you move the pointer over the arrow to the right of the text. A choice is made by clicking a second time with Select, Menu or Adjust. If Adjust is used the menu will stay on screen, otherwise it is removed. This is referred to either as *choosing* or *selecting* a menu item; choosing is preferred since it avoids confusion with the Select button on the mouse, but some manuals use 'selecting'.

Pointer

The *pointer* is the small dark and light blue arrow which appears on screen and is controlled by moving the mouse. Both the shape and – less commonly – the colours of the pointer may change (see figure four), usually to indicate a change of behaviour of some sort. The shape on the top right in figure four is especially important; it is the *hourglass*, and indicates the computer is busy. The hourglass may have a percentage displayed below it which indicates how far through the task the computer has progressed.

Next issue I will look at windows in more detail. Hopefully, this issue's tutorial has explained many of the basic terms used in describing how to use your Archimedes, both here and in the manuals and user guides that come with the computer and its software. When a manual says 'Double-click Select on the *Flibble* icon in the Filer window' you will have some idea what it's talking about. AU

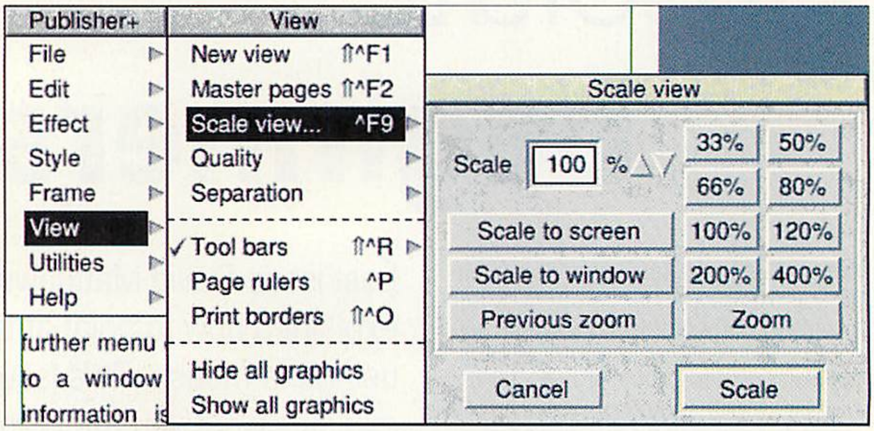


Figure three – part of a typical menu tree. The first menu opened is the one on the left. From this menu the 'View' sub-menu has been opened, and from this sub-menu a 'Scale view' dialogue box has been opened.

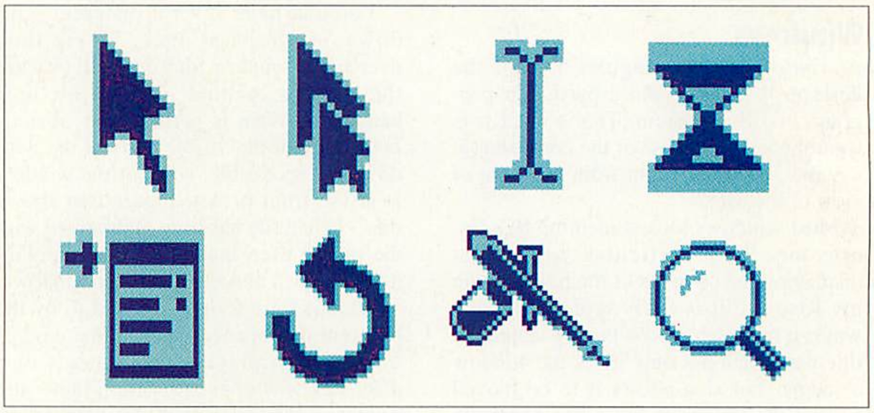


Figure four – various different shapes the pointer may assume.

Jargon box

The Adjust button – the right-hand mouse button.

Choosing – the act of picking an item from a menu by clicking on it.

Clicking – pressing then releasing a mouse button; the standard way of using the mouse.

The Desktop – the normal display on the Archimedes – the one that it (usually) starts in.

Dialogue box – a window which is part of a menu structure, and usually groups together a number of choices.

Double-clicking – clicking twice with a mouse button in quick succession.

Dragging – pressing a mouse button and keeping it pressed while the mouse is moved.

Hourglass – the name given to the pointer when it has changed shape to indicate that the computer is busy.

Icon – a particular single object in a window, either a line of text or a small graphic.

Menu – a text list giving a choice of actions, opened by clicking with the Menu button on the mouse.

The Menu button – the middle button on the mouse.

Menu tree or menu structure – the set of menus, sub-menus and dialogue boxes which may be opened by clicking Menu over a window; also any part of this set.

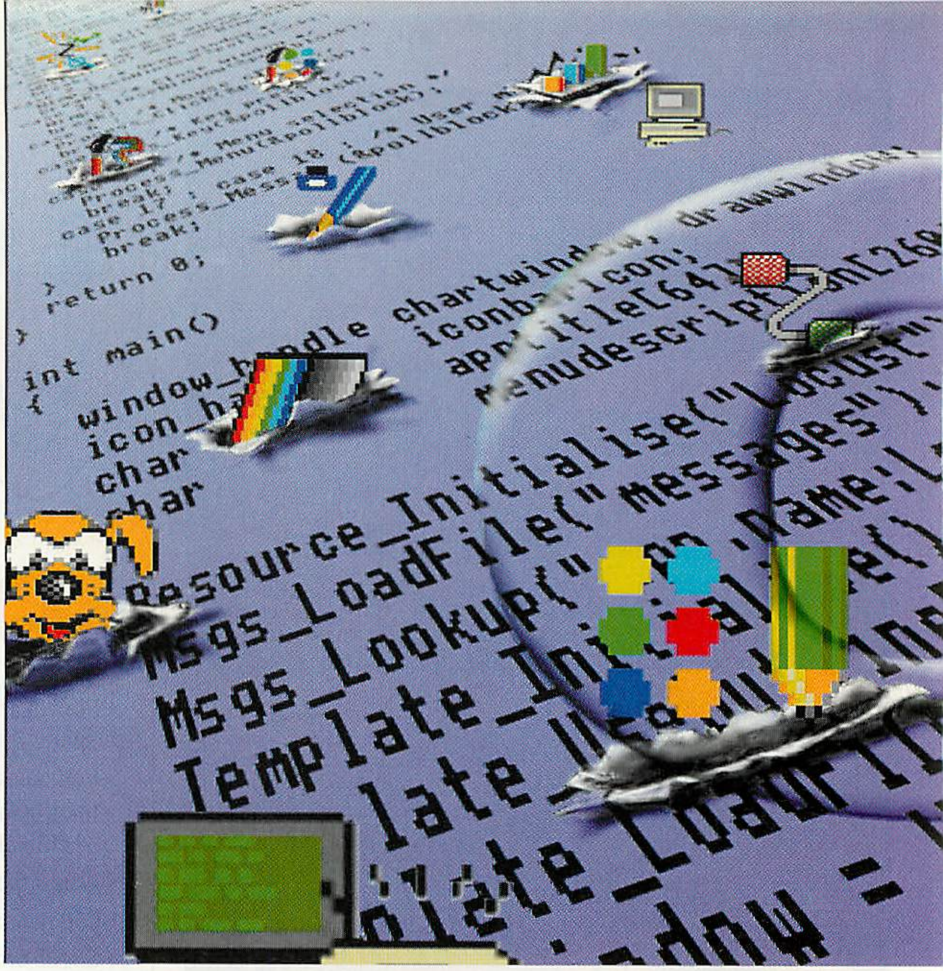
Pointer – the arrow (or whatever) controlled by the mouse.

The Select button – the left-hand mouse button.

Shift-click – a click made with the mouse while the Shift key on the keyboard is held down.

Sub-menu – a second (or third and so on) menu opened from an item in a menu with an arrow next to it.

Window – a rectangle drawn on a screen used to display information from a particular program.



JACK KREINDLER

C for yourself

In this month's tutorial, Steve Mumford investigates the functions associated with input and output.

Over the past few columns, we've had a look at some of the basics associated with creating a C program. However, we haven't paid much attention to the actual mechanics of passing information back and forth between the computer and the various devices attached to it. Not only is this vital for communicating with the user by means of the keyboard and VDU, but it also includes the saving and loading of files from disc.

In order to demonstrate the importance of these functions, cast your minds back a couple of months – David introduced the concept of arrays and used them to demonstrate the implementation of a simple database. Now imagine that database without loading or saving facilities, then remove all of the text displayed on the screen. Pretty grim, isn't it?

In this article I'll begin to take a look at the functions that cover input and output, starting off with printf() and scanf(). I'll then mention some of the processes involved in file handling, and we'll look at some of the more subtle commands next month.

Printing to the screen

If you take a look at the source code for a few C programs, you'll notice that the great majority of them include the line:

```
#include <stdio.h>
```

This orders the compiler to include the header file *stdio.h* which provides links to the standard routines used for input and output. They may not be the most elegant functions ever designed, but what's important is that they are standard on all versions of C – if you want your code to be easily portable, these commands are what you need.

The printf() function allows you to format text in some way as you print it – that's what the 'f' is there for. The format of the printf() command is shown below:

```
printf("This is some text\n");
```

So far, so good. The above command prints the phrase to the *standard output* – in normal cases this sends the message to the screen. The text between the quotation marks is termed the *control string*, and defines how your text is to appear on the screen. The \n code represents a newline character and is necessary because the printf() function does not automatically add one on to the end of a statement – unlike the PRINT command in BASIC. It's possible to include the codes anywhere in the control string, and this provides an easy way of printing more than one line at once.

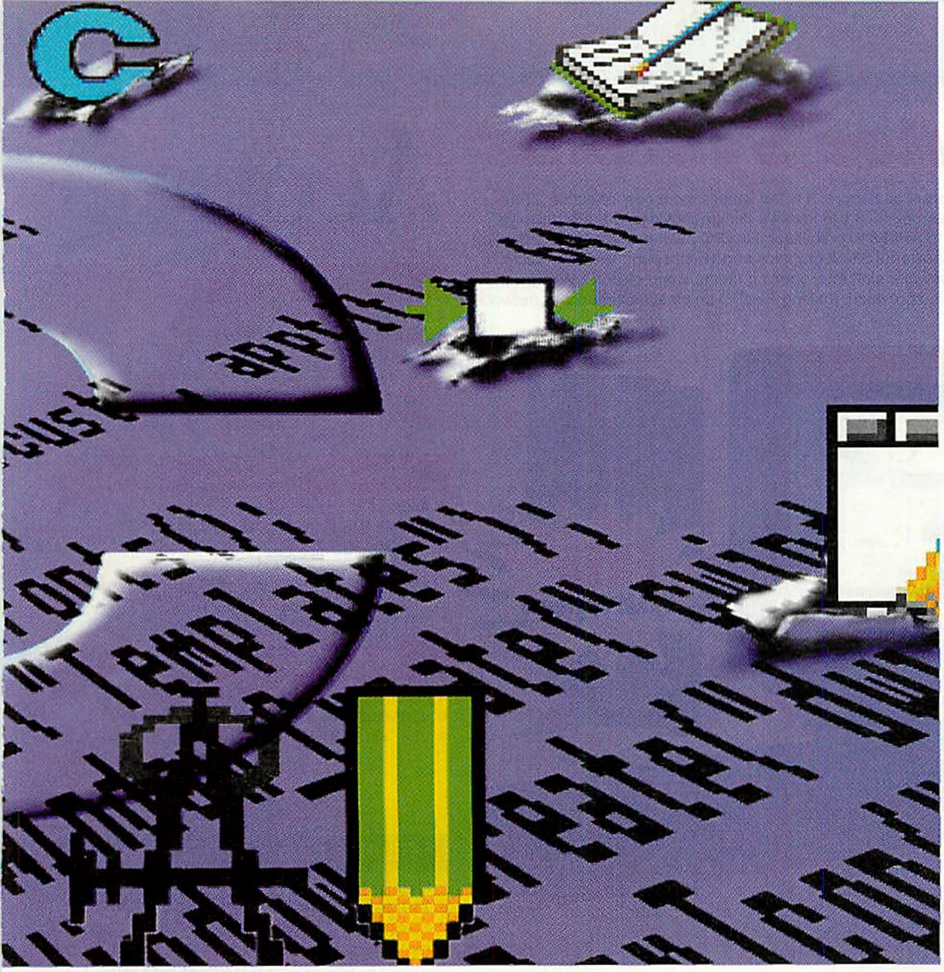
```
printf("First line\nSecond line\n\nFourth
line\n");
```

However, if you want to print out the value of a variable, the format of the command alters slightly. Consider the following:

```
int num = 14;
printf("The value of num = %d\n",num);
```

In this example, the computer would print the phrase in the quotation marks, replacing the 'conversion specifier' %d with the integer value of num. It's important to keep track of your variables – if num isn't an integer and you attempt to print it out as one, things would go sadly wrong. If you have more than one variable to print out, you'll need the corresponding number of specifiers in the control string:

```
printf("var1 = %d, var2 = %d\n",var1,
var2);
```



It's possible to add more information to the conversion specifiers which allow you to control the justification and length of the values you're printing. I've included several examples of printf() statements on the cover disc.

Reading from the keyboard

The routine to complement printf() is called scanf() and is a little different in the way it works. Although it looks very similar to the format of the printf() statement, it's important to understand that one is not the precise opposite of the other. Here's an example:

```
int var = 0;
printf("Please enter an integer:\n");
scanf("%d",&var);
```

You've still got the control string telling the command what it's looking for, but instead of a list of variables following it, there's a list of pointers. The scanf() function is looking for somewhere to store the data, and that's why it needs an address in the form of a pointer instead of a simple variable name. You can dispense with the ampersand if you're actually giving scanf() a pointer to begin with:

```
int *var;
scanf("%d",var);
```

In fact, if you did write &var the compiler would probably stop speaking to you. As you will discover, scanf() is somewhat fussy – that's why I had to include those special loops in last month's example programs.

```
scanf("%d",&choice);
while (getchar() != '\n') {}
```

The scanf() function looks for an integer entered from the keyboard when it is called. If it can't find one because you've just typed in some text, it gets upset – instead of giving up and wiping the input stream, which would initialise it for the next input, it leaves the offending data where it was. What this does, in effect, is to clog the input buffer, and any following scanf() statements are very likely to fail, since they're receiving data they weren't expecting.

This is where the while loop comes in. After the scanf() statement has executed, this loop steps through and discards whatever's left in the input buffer using the getchar() function until it finds a newline code. Since any data you enter from the keyboard ends with a newline, this neat loop purges the buffer and readies it for any following input. If you're going to be using scanf(), it makes sense to include these housekeeping devices – it's quite infuriating to see your masterpiece of coding curl up simply because you typed 'O' instead of '0'. I've got the tee-shirt, as they say. AU

File handling

To round off this month's tutorial, I'll take a quick look at how you redirect output to a file. The functions used to perform these operations are very similar to the ones we've used above – they are fprintf() and fscanf(). Their similarity arises from the fact that C attempts to treat all its inputs and outputs in the same manner, so whether it's printing to the screen or saving to a file, the overall mechanism is still the same.

There are two extra functions you must know about before you can use files to store data – these are fopen() and fclose(). Before saving data the computer must have been given some warning so it knows where to store the information. Conversely, when you've stopped using a file you must close it so that all the updates are made permanent and things are tidied up. When you open a file, you are given a handle – a form of identity number for that open file. From then on, instead of referring to the file by its name, you use the handle:

```
FILE *handle;
if ((handle = fopen("testfile", "w")) == 0) {
printf("Testfile could not be opened.\n");
}
```

The variable type FILE is defined in stdio.h, and contains information the computer needs to reference a data file – we need to create a pointer to a variable of that type. If the file could not be opened, then fopen() returns a value of zero, and this should be checked by the program so it can recover gracefully if there's a problem with the disc.

The fopen() statement takes two textual parameters – the first is the filename and the second determines what sort of access is needed on the file. In the above example, the filename is *testfile* and its access is w, which tells the computer to open a file for write access only. If the file does not exist, this command will create one. There are several methods of access, and as well as read and write there's also append which writes new data to the end of an old file. There's also a binary mode in which numbers are stored in machine representation rather than being converted to text.

Once you've finished with a file, you must close it with fclose():

```
if (fclose(handle) != 0) {
printf("File could not be closed\n");
}
```

If the file is closed properly the fclose() function will return a value of zero – again, it's important that this is checked.

Well, we're able to open and close files at will, but we haven't actually saved anything yet. I'll cover this next month, along with some more of the input and output routines.

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A3020 2M FD	–	£689	£769
A3020 2M HD80	–	£619	£909
A4000 2M HD210	–	£839	£919
A4000 2M Learning Curve	–	£889	£959
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PD - PDSView software required

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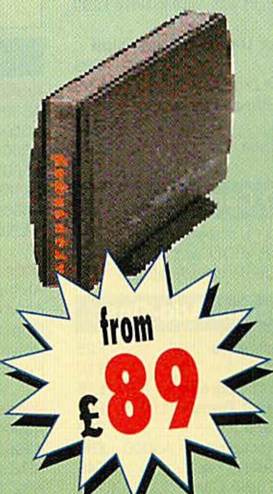
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Canon



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- SCSI-2 Interface Cable £20

Software
- upgrade to Spacetech Photodesk software £119
- Sleuth OCR software £40

Aries Monitors

EnergyPro 14" LR
- 14" hi-res 0.28mm dot pitch tube
- Low Radiation MPRII standard
- 800 x 600 resolution
- Tilt and swivel base
- Horiz frequency - 29KHz to 70KHz

£165

Alphascan Pro LR
- 14" hi-res 0.28mm dot pitch tube
- Low Radiation MPRII standard
- 1280 x 1024 @60Hz
- 1024 x 768 @72Hz
- Horiz frequency - 29KHz to 70KHz

£199

15" EnergyPro 6000i
- 15" hi-reso 0.28mm dot pitch tube
- Low Radiation MPRII standard
- EPA Energy Star compliant
- 1280 x 1024 @ 60Hz
- Horiz frequency - 29KHz to 70KHz

£239

17" EnergyPro 7560i
- 15" hi-reso 0.28mm dot pitch tube
- Low Radiation MPRII standard
- EPA Energy Star compliant
- 1280 x 1024 @ 60Hz
- Horiz frequency - 29KHz to 70KHz

£449

Hard Drives

A300/A400 IDE Hard Drive Upgrades
Complete with drive, interface, mounting kit, cables and software.

ADA0580	365Mb	11ms	£179
ADA2030	420Mb	11ms	£199
ADA2210	540Mb	12ms	£219

A5000/RiscPC IDE Hard Drive Upgrades
For use as replacement of existing drive.

ADA0880	365Mb	11ms	£119
ADA2060	420Mb	11ms	£149
ADA2220	540Mb	11ms	£399

- 2nd Drive Accessory Kit £10

IDE Interfaces & Accessories
- 8-bit IDE interface for A3000/A3010 £49
- 16-bit IDE Interface for A300/A400 £39
- Dual IDE Interface Cable £9

A3000/A3010 Internal IDE Hard Drives
Complete with drive, interface and software.

ADA0730	120Mb	19ms	£179
ADA2360	170Mb	13ms	£199
ADA2090	340Mb	11ms	£299
ADA2200	510Mb	11ms	£399

A300/A400 SCSI Hard Drive Upgrades
Complete with 16-bit interface, drive, cables and mounting kit.

ADA2300	365Mb	12ms	£249
ADA2310	540Mb	11ms	£299
ADA2320	1.0Gb	9ms	£499
ADA2330	2.0Gb	10ms	£849

SCSI Interfaces & Accessories
- 16-bit SCSI Interface - A300/A400 £89
- 32-bit SCSI II Interface RiscPC £159
- Dual SCSI Interface Cable - ribbon £9
- SCSI Interface Cable - round £15

Networking

Acorn Ethernet Network Interface Cards
- Acorn Ethernet Card - A5000 £149
- Acorn Ethernet Interface - RiscPC £99

Access Peer-to-Peer Networking
- Access - A5000 £145
- Access - A3020/A4000 £145
- Access - A3000 £145
- Access - RiscPC £119

Access+ Peer-to-Peer Networking
- Access+ - A5000 £TBA
- Access+ - A3020/A4000 £TBA
- Access+ - A3000 £TBA
- Access+ - RiscPC £TBA

i-Cubed Ethernet Network Interface Cards
- EtherLAN 102 BNC/TP - A3000 £125
- EtherLAN 200 BNC - A3020/A4000 £135
- EtherLAN 201 TP - A3020/A4000 £135
- EtherLAN502 BNC/TP - A5000 £125
- EtherLAN602 BNC/TP - RiscPC £105

Ethernet Hubs
- Aries EH-8 8port Ethernet Hub £129
- Aries EH-16 16port Ethernet Hub £279
- Aries EH-32 32port Ethernet Hub £459

Ethernet Cabling

Cable Length	Thinnet	UTP
3m	£5	£4
5m	£6	£6
10m	£8	£9
20m	£15	£16

Connectors and Accessories
- BNC 50ohm Terminator £0.95
- BNC T-connector £1.75
- BNC In-line coupler £1.75

Networking Software
- Level 4 Fileserver Release 3 £359
- TCP/IP Protocol Suite - single user £99
- OmniClient £tba
- InterTalk £tba

Upgrades & Accessories

RISC OS Upgrades
- Software Upgrade - all machines £74
- Carrier Board - A300/A440 machines £21
- Software Upgrade - Bulk 10 Pack £319

Memory Upgrades

Model	2Mb	4Mb	8Mb
A3000	£49	£119	£269
A3010	£59	£139	-
A3020/A4000	-	£89	-
A5000	-	£79	£269
A540/R260	-	£249	-

RiscPC Additional RAM Modules

2Mb	£79	4Mb	£125
8Mb	£249	16Mb	£399
32Mb	£POA	64Mb	£POA
1Mb VRAM	£89	2Mb VRAM	£159

Graphics/Sound Cards
- Acorn RiscPC 16-bit Sound Card £59
- CC ColourCard Gold - A300/A400 £239
- CC Eagle M2 Multimedia Card £319
- CC Hawk V9 MK2 Digitiser £189
- CC Chroma 500 Genlock Card £419
- CC Chroma 150 PAL Encoder £169
- CC Chroma Genlock Card £209
- CC TV Tuner £89
- CC TV Tuner & Teletext £159
- CC Movie Magic MPEG Card £249
- CC ScanLight Video 256 £199
- CC ScanLight 256 - A3000 Internal £189
- HCCS Vision24 254 line Digitiser £99
- HCCS Vision24 508 line Digitiser £149
- WE Scan256 handscanner - A5000 £115
- WE Scan256 handscanner - A3000 £125
- WE A4 Mono Scaner & Feeder £199
- WE Multiscan VIDC Enhancer £10
- WE SuperVGA VIDC Enhancer £15

Ultimate Expansion

Increase the expansion possibilities of your Acorn computer with the Ultimate Expansion system. In its simplest form it is a standard internal podule with built in user port and also space for a 2.5" IDE hard disk drive. Up to 3 micro podule slots are provided for other uses such as analogue port, video digitiser or even SCSI interface.

- Ultimate Expansion Interface £39
- Ultimate Expansion Interface & IDE £99
- Ultimate Expansion with 170Mb drive £249
- Ultimate Expansion with 340Mb drive £299

Micro Podules for Ultimate Expansion
- SCSI Interface £69
- Vision24 Colour Digitiser £99
- ScanLight 256 handscanner £229
- MIDI Interface £49
- Analogue Interface £29

I/O Cards
- A3000 I/O Card - User/Analogue £25
- A3000 User Port/MIDI Card £44
- A300/A400 I/O Card - User/Analogue £29

Miscellaneous Add-Ons
- A300 4 way Backplane £25
- A300/A400 Fan £10
- A3000 Serial Port Upgrade £18
- ARC to BBC Serial Transfer Link £15
- MEMC1A Upgrade Kit £29
- Floating Point Accelerator - A5000 £89
- A4 Notebook Battery Pack £49
- 25MHz ARM3 Turbo Card £149
- Sportster 14.4 Modem & ArcFax £159
- Sportster 28.8 Modem & ArcFax £239
- DataSafe 120Mb Portable Tape Drive £399

PC Cards
- 486 25MHz 0Mb PC Card - A5000 £349
- 486 50MHz 0Mb PC Card - A5000 £429
- 4Mb RAM module £125
- 8Mb RAM module £249
- 16Mb RAM module £399
- MS-DOS 6.2 & Windows 3.11 £89

RiscPC 486 PC Card
Add PC functionality to your RiscPC with the 486SX-33 2nd processor card

Introductory Offer Price **£99**

Accessories

Dustcovers & Carry Cases

A3000 Keyboard cover £5
A3000 Keyboard & Monitor cover £9
A300/A400 Micro & Monitor cover £9
A5000 Micro & Monitor cover £9
14" Monitor cover £6
A3000/A3010 Carry Case £10
A4 Notebook Carry Case £35

Mice & Joysticks

Archimedes MK4 Mouse £24
Acorn Logitech Mouse £27
Quest Tracerball £20
PowerPad Single Joypad £25
PowerPad Dual Joypad £34

Miscellaneous Accessories

A3000 Monitor Stand £15
A3000 External Podule Case £10
ARC Keyboard Extension Cable £5
ARC Mouse Port Splitter £5

We stock the complete range of spare parts call for prices and availability.

Concept Keyboards
- A4 2010 Concept Keyboard £99
- A3 2010 Concept Keyboard £109
- 2010 BBC User Port Cable £12
- 2010 Archimedes Serial Cable £12
- ARC Concept Keyboard Design S/W £20

Multiscan Monitors
- Acorn AKF52 - 14" £249
- Acorn AKF50 - 14" £299
- Acorn AKF60 - 14" £299
- Acorn AKF85 - 17" £969
- Panasonic TX-D1731 - 17" £499
- Panasonic TX-D2131 - 21" £1359
- Sony CPD-15SF1 - 15" £287
- Sony GDM-17SE1 - 17" £819
- Sony GDM-20SE1 - 20" £1315
- Taxan EV400 LR - 14" £190
- Taxan Ergovision 580 LR - 15" £285
- Taxan Ergovision 880 LR - 17" £520
- Taxan Ergovision 2100 LR - 21" £1530

Diskettes

Excel Diskettes - Lifetime Guarantee
- Excel 3.5" DSDD Diskettes - 10pk £6
- Excel 3.5" DSHD Diskettes - 10pk £7
- Excel 3.5" DSHD Diskettes - 50pk £22

3M/Verbatim Diskettes
- 3.5" DSDD Diskettes - 10pk £6
- 3.5" DSHD Diskettes - 10pk £7
- 5.25" DSDD 80T Diskettes - 10pk £7
- 5.25" DSHD Diskettes - 10pk £10

Educational Discounts
available on some products to Schools, Colleges & Universities
Call 01582 745555 for details

Printers

LUTON SHOWROOM
Finway, Dallow Road, Luton, Beds.
Tel: 01582 74 55 55

WATFORD SHOWROOM
250 Lower High Street, Watford, Herts.
Tel: 01923 23 77 74

Laser Printers

Brother HL630	6ppm	£326
Brother HL660	6ppm	£473
Canon LBP 4i*	4ppm	£395
Canon LBP-8 IV*	8ppm	£905
Epson EPL-3000*	4ppm	£389
Epson EPL-5600*	6ppm	£594
HP Laserjet 4L	4ppm	£386
HP Laserjet 5P	5ppm	£POA
HP Laserjet 4 Plus	12ppm	£938
HP Laserjet 4V - A3	16ppm	£1372
HP Laserjet Colour	2ppm	£4395
OKI OL-400ex	4ppm	£289
OKI OL-410ex	4ppm	£399
Panasonic KX-P4400	4ppm	£270
Panasonic KX-P4401	4ppm	£330
Panasonic KX-P4410**	5ppm	£318
Panasonic KX-P4430**	5ppm	£479
Panasonic KX-P4440**	10ppm	£679

All printers are covered by 12 months RETURN TO BASE warranty unless stated differently as below:
* = 12 months On-Site Warranty
** = 2 years On-Site Warranty

Inkjet Printers

Canon BJ200ex	80col	£196
Canon BJ30	80col	£POA
Canon BJ230	132col	£247
Canon BJ300	80col	£364
Canon BJ330	132col	£404
Canon BJC4000 Colour	80col	£270
Canon BJC600e Colour	80col	£344
Canon BJC70	80col	£POA
Canon BJC800 Colour	132col	£1065
Epson Stylus 800+	80col	£168
Epson Stylus Colour	80col	£346
Epson SQ870	80col	£415
Epson SQ1170	132col	£580
HP DeskJet 320	80col	£165
HP DeskJet 320 & CSF	80col	£180
HP DeskJet 540	80col	£204
HP DeskJet 660 Colour	80col	£336
HP DeskJet 850 Colour	80col	£429
HP DeskJet 1600 Colour	80col	£920
HP PaintJet XL300 - A4	80col	£1599
HP PaintJet XL300 - A3	132col	£1769
Star SJ144	80col	£285

9pin Matrix Printers

Citizen ABC	80col	£103
Citizen ABC Colour	80col	£125
Citizen Swift 240	80col	£160
Citizen Swift 240 Colour	80col	£178
Citizen Swift 24X	132col	£187
Epson LQ150	80col	£112
Epson LQ150 Colour	80col	£158
Epson LQ570+	80col	£185
Epson LQ1070+	132col	£282
Epson LQ1170	132col	£400
Epson DLQ3000 Colour	132col	£672
Pansonic KX-P2023	80col	£108
Pansonic KX-P2135 Col.	80col	£124
Pansonic KX-P2124	80col	£198
Pansonic KX-P3626	132col	£259
Star LC24-20 II	80col	£113
Star LC24-15 II	132col	£232
Star LC24-300	80col	£188
Star LC240	80col	£92
Star LC240 Colour	80col	£103
Star XB24-200 Colour	80 col	£315
Star XB24-250 Colour	132col	£385

24pin Matrix Printers

Citizen Swift 90	80col	£114
Citizen Swift 90 Colour	80col	£121
Citizen Swift 120D+ Parallel	80col	£90
Citizen Swift 120D+ Serial	80col	£105
Epson LX300	80col	88
Epson FX870	80col	£221
Epson FX1170	132col	£280
Epson DLQ3000		£1099
Epson DFX5000+	132col	£89
Panasonic KX-P1150	80col	£259
Panasonic KX-P3696	132col	£259
Star LC15	80col	£177
Star LC100 Colour	132col	£89
Star LC90	80col	£89
Star ZA200 Colour	80col	£255
Star ZA250 Colour	80col	£315

Printer Accessories

Memory Upgrades

Type	1M	2M	4M
Canon LBP-4+	£139	–	–
Canon LBP-8 IV	£129	–	£299
Epson 5200/5600	£58	£115	£215
HP III/IIIP/IIID	£75	£115	£135
HP II/IID	£75	£115	£135
HP 4L/4MI	£75	–	–
HP 4/4M/4P/4AV	£75	£85	£125
Pan 4420/4450	£75	£115	£135
Pan 4410/4430	£129	£199	–
Pan 4400/5400	£89	£139	£229
OKI OL400ex	£99	£118	–
Star LS-5	£75	–	–

HP DeskJet 500 256K RAM	£75
Panasonic 32K Buffer - Matrix range	£16

Laser Consumables

Type	Toner	Drum	Dev
Brother HL630	£20	£99	–
Canon/Star 4s	£46	–	–
Canon LBP-8 IV	£70	–	–
Epson 4100/4300	£75	£89	–
Epson 5200	£85	–	–
HP III/IIID	£47	–	–
HP IIP/IIIP	£46	–	–
HP 4/4M	£72	–	–
HP 4L/4ML/4P/4MP	£49	–	–
OKI OL-400/800	£19	£189	–
OKI OL-400ex	£17	£129	–
Pan 4410/4430	£29	£80	£90
Pan 4440	£32	£108	£115
Pan 4420	£24	£60	£55
Pan 4450/I/51/55	£18	£75	£60
Pan 4400/5400	£12	£69	–
Star LS-5	£83	–	–

Sheet Feeders

Canon BJ10ex/BJ10sx		£40
Canon BJ300	Std: £88	2nd: £88
Canon BJ330	Std: £92	2nd: £92
Citizen Swift 200/240		£75
Epson LQ570/LQ870	Std: £47	Hi: £139
Epson LQ1070/1170	Std: £89	Hi: £207
HP DeskJet 320		£48
Panasonic 1170/1180/1123		£59
Panasonic 1124/2124		£79
Panasonic 1624/2624		£128
Panasonic 2135/1150		£30
Star LC100		£69
Star LC24-20		£69
Star LC200/LC24-200		£69

Tractor Feeders

Epson LQ100/150	£29
Epson LX300	£18
Epson LQ570 Pull	£39
Epson FX/LQ870	£45
Epson FX/LQ1170	£65

Colour Kits

Citizen Swift 24/200/240	£36
Citizen ABC	£22
Epson LX300/LQ300	£33
HP DeskJet 320/540	£28
Panasonic 2180/2123/2124	£32

Ribbons/Ink Cartridges

(Manufacturers Original Ribbons Only)

Type	Black	Colour
Canon BJ10ex/sx	£14	–
Canon BJ200/BJ230	£16	–
Canon BJ300/BJ330	£11	–
Canon BJC4000	£7	£13
Canon BJC600	£6	£7
Canon BJC800/820	£16	£22
Citizen 120D+	£4	–
Citizen Swift 200/240	£4	£12
Citizen Swift 24X	£8	£18
Epson LX400/850/FX870	£4	–
Epson LX100	£4	–
Epson LQ100	£5	–
Epson LQ150	£4	£12
Epson LQ570/870	£5	–
Epson LQ1070/1170	£8	–
Epson Stylus 800/1000	£10	–
Epson Stylus Colour	£15	£21
Epson SQ870/SQ1170	£26	–
Fujitsu B100/B200	£18	–
Fujitsu DL1150/DL1250	£6	£8
HP DeskJet 500 Series	£20	£21
HP DeskJet 310/320	£15	£21
HP DeskJet 1200	£20	£21
HP PaintJet XL300	£16	£18
Kaga/Taxan 810/815	£5	–
Pan 1170/1180/1150	£7	–
Pan 1123/1124	£7	–
Pan 2180/2123/2124/2135	£7	£14
Pan 1624/2624	£8	–
Pan 3626/3696	£11	–
Star LC10/20/100	£5	£9
Star LC200	£5	£11
Star LC24-20/24-200/240	£5	£12
Star LC24-30	£8	£12
Star ZA/XB24-200/ZA250	£5	£12
Star SJ48	£16	–
Star SJ144	£5	£8

Miscellaneous

Canon BJ10sx Battery Pack	£33
Epson 0K Serial Interface	£29
Epson 8K Serial Interface	£75
Epson 32K Serial Interface	£95
HP DeskJet 500 FX Emulation Cart.	£49
HP DeskJet 500 Dustcover	£6
HP DeskJet IBM Emuation Cart	£57
HP DeskJet 320 Battery Pack	£33
HP DeskJet 320 Parallel Cable	£12
HP DeskJet 1200 PostScript SIMM	£499
HP DeskJet Prestige Elite Font Cart	£55
HP DeskJet Letter Gothic Font Cart	£56
HP LaserJet IIIP Lower Cassette	£115
HP LaserJet 4 Lower Cassette	£205
HP LaserJet 4Si Duplex Unit	£475
HP LaserJet Font Cartridges	from £45
HP LaserJet FX/IBM Emulation cart	£79
HP LaserJet 4P A5 Paper Feeder	£85
HP LaserJet 4 Envelope Feeder	£199
Panasonic KX-P4420 Ozone Filter	£9
Panasonic KX-P4450 Ozone Filter	£20
Panasonic Serial Interface	£49
Star 8K Serial Interface - LC range	£52
Star 8K Serial Interface XB/ZA	£39
Dustcover for 80 column printers	£6
Dustcover for 132 column printers	£10
80 column Perspex Printer Stand	£12
132 column Perspex Printer Stand	£18

On-Site Warranties

Model	1 year	3 year
Brother LH630/631/660	£34	–
HP Mono DeskJets	£32	£40
HP Colour DeskJets	£45	£85
HP LaserJet 4L/4P	£78	£100
HP LaserJet 4+4M+	£135	£185
HP LaserJet 4V/4MV	£425	£485

Ink Refill Packs

Canon BJ10sx & BJ200/230 2 pack	£12
Canon BJ300/BJ330 2 pack	£12
HP DeskJets Hi-Capacity 2 pack	£24
HP DeskJets Hi-Capacity 5 pack	£35
HP DeskJet Colur Refill	£49

Ink Refill Packs

Black Cartridge for Canon BJC800	£10
Colour Cartridge for Canon BJC800	£12
Black Cartridge for Canon BJC600	£25
Colour Cartridge for Canon BJC600	£26
Black Cartridge for Epson Stylus Col.	POA
Colour Cartridge for Epson Stylus Col.	POA

Paper & Labels

A4 Cut Sheet Paper - 500 sheets

A4 90g Laser/Inkjet Paper	£7.00
A4 80g Laser/Copier Paper	£3.00
A4 80g Coloured Paper	£3.50

Inkjet Paper & Transparencies

Canon BJC A4 Transparency (50)	£39
Canon BJC A4 Paper (50)	£22
Canon BJC800 A3 Paper (50)	£45
Epson Stylus 360dpi A4 Paper (50)	£17
Epson Stylus 720dpi A4 Paper (50)	£19
Epson Stylus A4 Transparency (50)	£59
HP DeskJet Glossy A4 Paper (50)	£35
HP DeskJet A4 Transparency (50)	£35
HP DeskJet A4 Paper (200)	£15
Image+ A4 Glossy Paper (50)	£28
Image+ 90g A4 Paper (200)	£10
Image+ 100g A4 Paper (200)	£12
Image+ 120g A4 Paper (200)	£14
Image+ A4 Transparency (50)	£28

Fanfold Paper

1000 60g 9.5" x 11" - 1pt	£6
2000 60g 9.5" x 11" - 1pt	£8
1000 60g 9.5" x 11" - 2pt	£21
2000 60g 9.5" x 11" - 2pt	POA
700 60g 9.5" x 11" - 3pt	£28
1000 60g 15" x 11" - 1pt	£8
2000 60g 15" x 11" - 1pt	£11
1000 70g True A4 - 1pt	£8
2000 70g True A4 - 1pt	£15

Continuous Fanfold Labels

1000 89mm x 36mm Single Row	£4.50
1000 89mm x 36mm Twin Row	£4.80
1000 89mm x 49mm Single Row	£4.95
1000 102mm x 36mm Twin Row	£4.70

Laser Lables (on A4 sheet)

2400 70mm x 37mm (3x8)	£15
2100 70mm x 37mm (3x7)	£15
1600 105mm x 35mm (2x8)	£17
1400 105mm x 38mm (2x7)	£16

Printer Sharer

Manual Printer Sharers

Connects	Serial	Parallel
2in/1out	£12	£13
2in/2out	£28	£29
3in/1out	£15	£17
4in/1out	£24	£26
5in/1out	£27	£28

Note: Serial sharers have 25-way 'D' type female connectors and parallel sharers have 36-way Centronics connectors

Automatic Parallel Printer Sharer Buffers

Type	0Kb	256K	1Mb
2in/1out	£29	–	–
2in/2out	–	£105	£134
4in/1out	£45	–	–
4in/2out	£69	£124	£149
8in/1out	£64	–	–

Automatic Serial Printer Sharer Buffers

Type	0Kb	256K	1Mb
2in/1out	£27	–	–
2in/2out	–	£124	–
4in/1out	£44	–	–
4in/2out	£69	£147	–
8in/1out	£62	–	–

Note: On both Serial and Parallel versions the 2in/1out is not available with 256K buffer.

RAM Expansion for Auto Sharers

	256K	1Mb	2Mb
RAM Module	£59	£78	£124

Compact Convertors

Serial to Parallel Convertor	£49
Serial to Parallel Convertor/Buffer	£55
IEEE-488 to Centronics convertor	£49
RS232 to RS422 Convertor	£37
Parallel Line Extender	£37

Pocket Buffers

Type	256K	1Mb	2Mb
Parallel Flash Buffer	£65	£98	£138
Parallel Turbo Buffer	£85	£125	£158
RS232 Plotter Buffer	£155	£184	£330

Full Colour Printer Accessories Catalogue available on request

Printer Cables

Type	1.8m	5m	10m
PC Parallel - 18 wire	£4	£8	£13
PC Parallel - 25 wire	£5	£10	£15
25 'D' Male/Male	£4	£8	£13
25 'D' Male/Female	£4	£8	£13
36 Cent Male/Male	£7	£10	£15
BBC Parallel	£5	–	–
9 'D' Female/25 'D' Male	£8	–	–
Archimedes Serial Cable	£9	–	–

Aries

Leasing finance available at very attractive rates to businesses, schools and colleges etc. (subject to status). Minimum order value £1000

Credit terms also available to private customers, with repayment periods from 12 to 60 months. APR 19.9%

Software

As one of the largest dealer in Acorn software in the UK, we doubt that you will find any of the titles listed here cheaper alsewhere.

Also if there is something you don't see listed, give us a call and we will attempt to source it for you and give you the best price.

All software requires at least 1Mb RAM and RISC OS operating system.

Special notes
† - not suitable for RiscPC
†† - requires 2Mb RAM
‡ - hard disk required

Games

4th Dimension
Adventures of Sylvia Lane £16
Birds of War † £22
Black Angel £22
Break 147 & Superpool £22
Camage Inc. £16
Chocks Away Compendium † £18
Chopper Force £15
Cyber Chess £18
Demon's Lair £18
Dungeon †† £18
Enter the Realm † £18
E-Type II £22
E-Type Compendium £15
Galactic Dan £15
Grevious Bodily ARM £15
Haunted House £18
Holed Out Compendium £18
Pandora's Box £15
Real McCoy 2 £20
Real McCoy 3 £20
Real McCoy 4 £20
Saloon Cars Deluxe £20
Stunt Racer 2000 † £18
Stunt Racer 2000 Extra Tracks † £14
Time Machine £18
Virtual Golf † £18
Virtual Golf Augusta † £12
Watford Learn & Play Pack £40

Krisalis Software
Battle Chess £17
Cannon Fodder £17
Champions £20
Chuck Rock £8
Gods † £8
Hero Quest £18
Heimdall †† £18
James Pond † £8
Krisalis Collection £20
Lemmings £14
Lemmings 2 - The Tribes £18
Lemmings Double Pack - RiscPC £21
Lotus Turbo Challenge II † £18
Mad Professor Mariati £8
Manchester United † £8
Manchester United Europe † £8
Nebulus £14
Oh No! More Lemmings £12
Populous £18
Quest for Gold (HD) £10
Revelations £8
Sim City £18
Sim City 2000 £25
Sim City 2000 - RiscPC £25
Speedball 2 £17
SWIV £8

Gamesware
Aries £21
Cycloids £14
FRED £14
Games Wizard £18
Ixion £14
James Pond 2 - Robocod £18
Playdays £18
Simon the Sorcerer £29
Xenon 2 £18

Renegade
Chaos Engine £18
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*info

Dave Lawrence and Dave Acton present more programs, tips and techie trivia from beyond the PRM.

Colour Card-Sharp

Author: Jan Vibe

Our old faithful, Jan Vibe, returns this month with some doodles for use with the Wild Vision/Computer Concepts ColourCard. Owners of said card may be feeling left out in these days of Risc PCs and 16 million colour modes, but uncle Jan has not forgotten you.

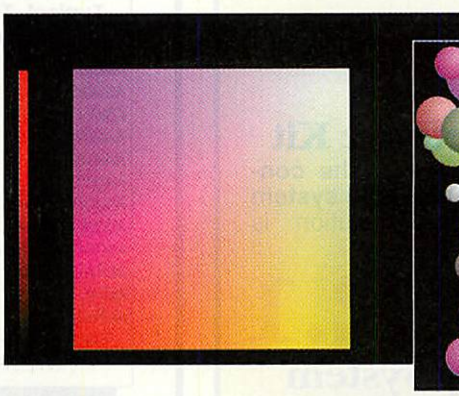
This month's selection of good vibes makes use of the 32 thousand colour mode (number 107 in fact). (You know, when I was a lad 32K was how many bytes you had, not how many colours. Bread was tuppence a loaf and if you got 100K of data on a disc you were lucky. I digress.)

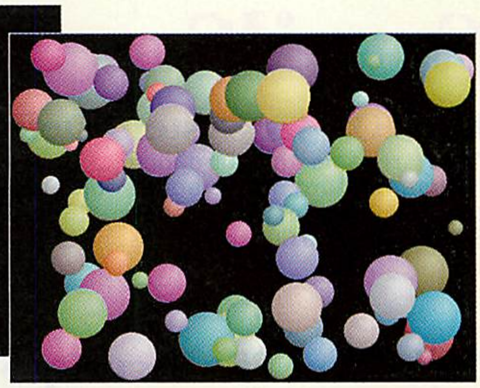
ColourCube shows a slice of the RGB colour cube. The red component can be changed by moving the mouse. *ColBalls* simply plots a load of balls – very nicely shaded ones as it happens, in a variety of pastel hues.

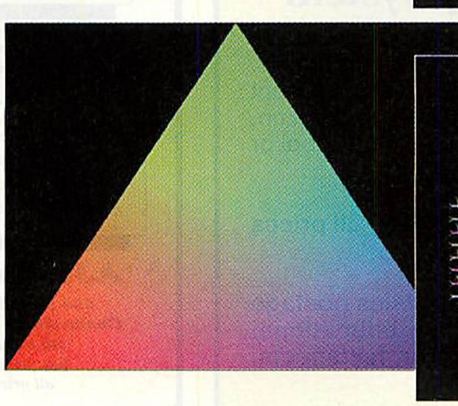
ColTri is a little recursive number. It plots a triangle with red, green and blue corners, and appropriate mixtures in between. The recursive bit is pretty standard stuff. The triangle is continually subdivided into four and when the subdivisions get sufficiently small, the distances from each corner of the big triangle are calculated. From these, the R, G and B components are calculated, a *ColourTrans* call sets the appropriate hue, with dithering if required, and the triangle plotted – simple really!

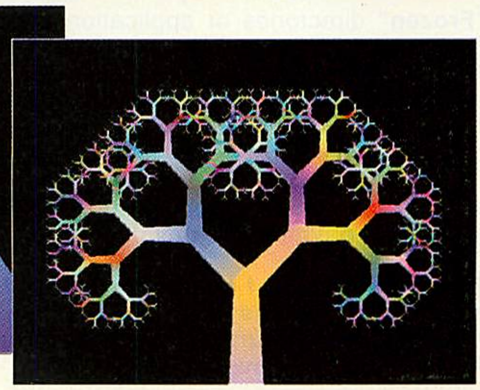
Finally, *RGBtree* is the latest in a line of tree-like offerings from Jan. Again, recursion is the method used and with each new branch a new (random) colour is chosen. The program interpolates between the colours at the two ends to produce something that wouldn't look amiss in the Magic Roundabout.

Ah, but what about those without ColourCards but perfectly serviceable Risc PCs instead? Well, as you might guess we have provided Risc PC versions of all the above. In fact, the changes required were very slight. Of course, we used Brian Cooke's lovely PROCmode to select a 32K mode politely. A couple of twiddles to allow for a slightly different screen resolution and away you go! The only other change was to replace one or two of the slightly cumbersome *ColourTrans* calls with a simple GCOL R,G,B which makes the demos a little neater and a little faster too. More from Mr Vibe soon.









Drawing a blank

We've had a request from Steve Kolarchi of Tunbridge Wells concerning the screen-blanker present in RISC OS 3. He wants to be able to force the screen to blank when he leaves his machine rather than have the computer wait for ten minutes or so. In these days of energy-efficient monitors, DPMS and so on, it would seem prudent to be able to tell the computer that you've finished working for the time being and just want to read that really interesting piece in *Acorn User*.

Steve's not wrong in telling us that the normally informative PRM is unfortunately a little cagey on the subject of the ScreenBlanker. Page 4-110 gives details of the only SWI ScreenBlanker_Control along with the infuriating message 'This SWI is for internal use by the Portable module. You must not use it in your own code.' Needless to say, after not much fiddling about we managed to work out what this call does and can reveal all, as long as you all promise not to use it in your own code.

ScreenBlanker_Control has five sub-reason codes, selected with r0 as follows:
r0 = 0, blank screen
r0 = 1, restore a blanked screen
r0 = 2, set screen flash (see below)
r0 = 3, set blanktime to r1 (centiseconds)
r0 = 4, read blanktime, returned in r1 (centiseconds)

r0 = 2 is slightly strange, and is in fact really used by the portable module. When the A4's batteries are getting low, the screen flashes and it uses this call to do this. The extra parameters are:
r1 = time screen is 'on' (normal)
r2 = time screen is 'off' (blanked)
r3 = minimum number of flashes before keys/mouse restore screen. (Optional)
r4 = flags passed in r0 of service calls &7A (ScreenBlanked) and &7B (Screen Restored) (Optional)

We can't think of any earthly reason for anything but the portable module wanting to use this (not that you would). The other calls are much more straightforward – so a simple SWI ScreenBlanker_Control,0 is all that Steve would need – shame you're not allowed to use it. What is most useful is that placing this SWI within a menu-based desktop launch program such as *Menon* or *Director* works surprisingly well, as long as you don't wobble the mouse too much when selecting the menu option!

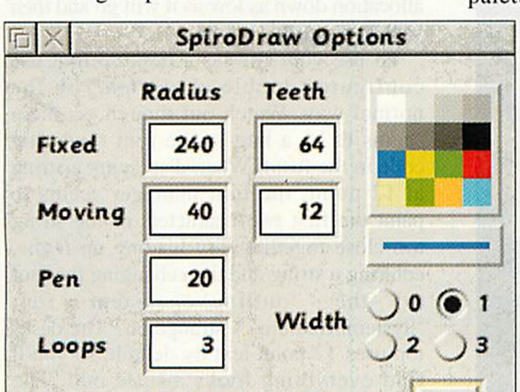
One further interesting point about the screen blanker is that it uses an undocumented entry to PaletteV, the palette control vector. We were quite surprised seeing this whizzing past with our vector watcher program. Page 1-104 of the PRM reveals the purpose of r4 = 1 through 5 to read and set the palette, but the screen-blanker uses r4 = 6. In this case r0 = 1 seems to mean set the palette to black and r0 = 0 means restore it. Remember kids, don't use this at home.

Spiromania

Author: Mrs A. Miskin

Many, many moons ago we published the first in what has turned out to be a very long line of programs which imitate, in some shape or form, that toy we all got for Christmas circa 1977 with the little plastic wheels. This was before the days when all the class nerds got *GeoSafari*, you understand. *INFO readers have taken a simple child's plaything and turned it into an art form, if not an art movement in itself.

Mrs Miskin of Loughborough tops the lot with *SpiroDraw*. It is a fully multi-tasking desktop version which outputs the designs produced as *Draw* files

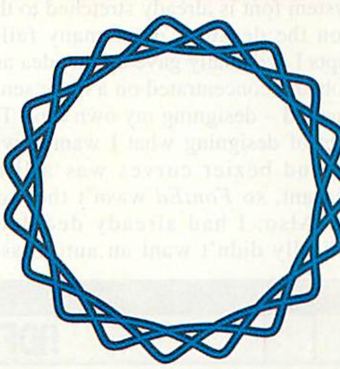


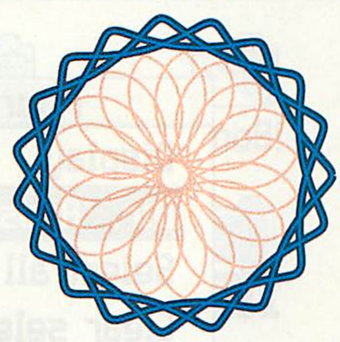
(using Bezier curves no less). The patterns produced are really quite delightful and would be impossible to produce any other way.

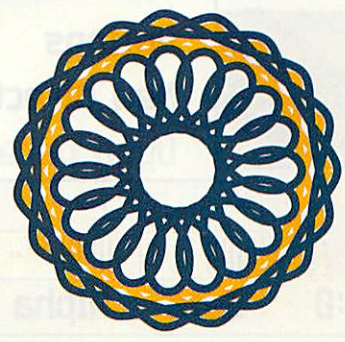
To use *Spirodraw* install in the usual way and click on the *Spirodraw* icon to bring up the parameter window. The patterns are produced by one wheel moving around another fixed wheel. The moving wheel may be within or outside the fixed one and both the radius and number of teeth on the wheels can be set. The width of the line used can also be altered (from 0 to 3), although you can make finer adjustments in *Draw* later on if you required – *Spirodraw* takes care of the hard work of creating the Bezier curves!

Just the 16 desktop colours are used, although if you change the desktop palette the correct new colours will be saved to the file. The number of 'loops' can be set – i.e. how many times the moving wheel goes round the fixed one – and will usually be set automatically, so one 'cycle' of the pattern will be completed. Finally, the 'pen' parameter controls the position of the pen from the centre of the moving wheel. A position of 0 produces the circle you would expect.

A menu provides Stop, Undo and Clear facilities and several patterns can be combined in one design – just use Clear to start again. The finished design can be saved in one of three formats – as a Drawfile, a sprite (in mode 12) or as a text file. Currently, textual definitions cannot be reloaded. Mrs Miskin has provided a variety of examples which are included on the disc both as *Draw* files and text descriptions.







Character building

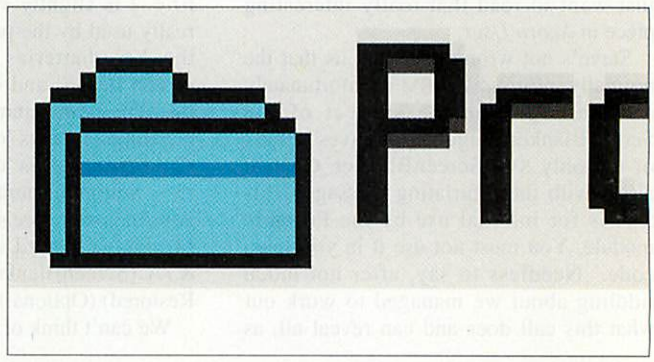
Author: Dave Lawrence

The ability to change the desktop font under RISC OS 3.5 has given us the power to make all our icons come up in Zapf Chancery Medium Illegible and amaze all our friends stuck with whinedoze-based machines. Outline desktop fonts are not without their problems though – programs based around a fixed width system font produce skewed output (take a look at a 'full info' filer): anti-aliased text, although very clever, is not necessarily what you want to work with every minute of the day.

This is all assuming you can actually find a font you like that's not too wide and not too narrow, not too bold or too faint, and comes complete with all the Latin1 top-bit set characters. I've tried a number of fonts over the last year and never been entirely happy with any of them for the above reasons. When it came down to it, what I wanted was the '90's update to the good old system font – simple, bold(ish), uncluttered, practically fixed width, but not restricted to an 8x8 grid.

I started experimenting by patching the OS to use an 8x16 character set – after all, the system font is already stretched to that size on the desktop. After many failed attempts I eventually gave up the idea as a bad job and concentrated on a more sensible method – designing my own font. The thought of designing what I wanted with paths and bezier curves was a little unpleasant, so *FontEd* wasn't the right thing. Also, I had already decided I specifically didn't want an anti-aliased font so a scalable font was wrong anyway. I wanted to design the characters on a grid using *Paint* or something.

Reading the chapter on font files in the PRM revealed two new font file formats that contain bitmaps rather than outline data – this was almost right except these files are actually meant for storing pre-rendered versions of outline fonts to speed up the font manager's cacheing and plotting routines, and as such are really only an extension to the outline format. This meant that any installed fonts using them had to come complete with an outline file as well. More out of desperation than anything, I read backwards a bit and came across the first format font files as used by the original non-outline font manager in RISC OS 2. This seemed a bit of a backwards step at first, but in fact was the solution. *x90y45* files (as they are called) contain 4bpp bitmaps of the characters, making 16 greys available. An accompanying *IntMetrics* file provides the data for the widths of the characters.

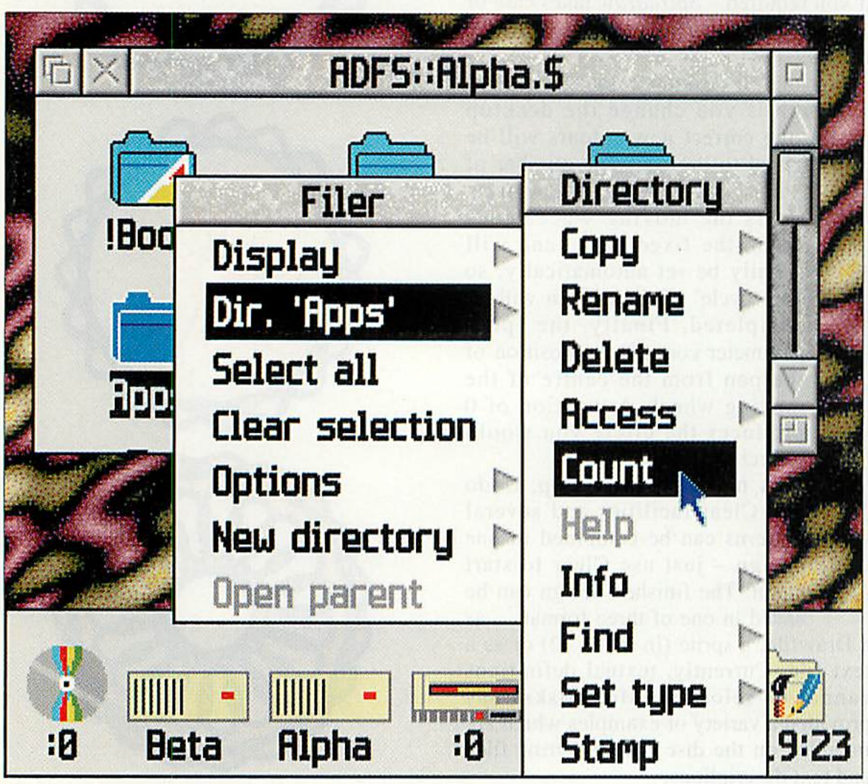


I designed a font in *Paint* and aided only by a couple of ancient RISC OS 2 fonts, wrote a program to convert the resulting sprite file into a RISC OS font. You can find the font (christened Pixel) on the cover disc. Two versions are supplied – one fixed width, one proportional. I hope you like them!

If you'd like to design your own font, the conversion program is also on the disc. If you're starting from scratch, run *Make4bpp* first to create the empty character sprites, then you'll have to type in the height and width you'd like – I found 17 pixels high was about right. Load the sprite file into *Paint* and design away. The first sprite in the file is important – do not remove or rename it.

To create a font file run *4bppToFont* and enter the name of your sprite file and then the font family (e.g. Pixel). Conversion takes quite a while, but a mugwatch is provided. The font will be saved in *adfs::4.$.!Boot.Resources.!Fonts,* the normal place for fonts – you can change this if you wish. Double-click on *Fonts* to kick the font manager into noticing your font and you should then be able to try it out. If you fiddle around with your font you'll need to make the font manager 'forget' about the old version. First make sure nothing is using your font, then using the task manager display, drag the font manager memory allocation down as low as it will go and then back to a sensible value.

To use your font as a desktop font use configure (double-click *Boot*) in the normal way. Watch out though, as there seems to be a bug in the font rendering code in the ROM. When displaying a string at 12 point, the font manager seems to paint the first two characters of the string too close together. Try loading up *Draw*, entering a string and then changing the font to the 'outline' system font 'System.Medium' – strange eh? The desktop uses 12 point text by default, so you'll find everything looks a little odd. The simplest solution I've managed to find is to change the desktop font size very slightly (it can be adjusted in 16ths), by *Set Wimp$FontSize 193, to make this permanent add a line to the file !Boot.Choices.Boot.PreDesk.Configure. This does mean the characters are slightly ghosted in 256 colour modes (use *CloseUp* to see what I mean), but not annoyingly so.

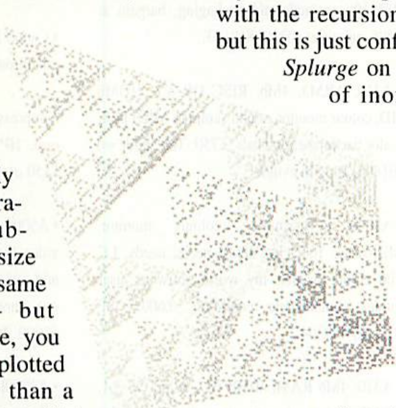


Foggy and Splurge

Author: Alistair Turnbull

These may well be two characters from *Last of the Summer Wine* but they are also the names of the latest pair of graphical offerings from Alistair Turnbull.

Foggy is a pyramid '...for old time's sake. It's all in perspective, all depth cued, all calculated in real time, and all written in a couple of hours. The only feature really worth shouting about is the fact that the points are positioned perfectly (i.e. with no inaccuracies) in space relative to the corners. Actually plotting them on the screen incurs inaccuracies, because there are a finite number of pixels.



'It works by recursively subdividing an initial pyramid, except the sub-pyramids are twice the size they should be – i.e. the same size as the parent – but because it's in perspective, you don't notice. A point is plotted when it is further away than a pre-set threshold, chosen so that further subdivisions would only make a pixel or so of difference. Points are discarded (i.e. not subdivided any further and not plotted) when they go far enough outside the visible cone – but I use a cube for speed. In this way, the points which end up very close get subdivided a lot, while those further away don't. All the numbers are always about the same size, so I can use integer arithmetic throughout.

'If you are actually on one of the points, you would need an infinite number of subdivisions to draw the correct picture, and this routine would try to oblige and run out of stack space. To get round this I have set a limit to the recursion depth. At the limit, points are plotted to an accuracy rather higher than that used to store the position of the viewer. I need a counter of the recursion depth anyway to calculate the shade of grey when the points are eventually plotted. You could say that I'm using floating point numbers, with the recursion counter as the index, but this is just confusing.'

Splurge on the other hand, is a bit of inoffensive psychedelia, although it also apparently took just two hours to write!

'There's no great feat of processing here, and the program is rather badly written, but it's a really nice effect. A blob and an anti-blob follow a random path, with the anti-blob a few thousand frames behind the blob. The path is just the superposition of three circular motions of different sizes and speeds, with the speeds changing gradually and randomly. The big one goes slowest, and the small one fastest. Drawing a blob involves adding one to all the bytes in screen memory in a small circle, and drawing an anti-blob involves subtracting one. This is handled by the routines inc% and dec%. The shape of the circle is pre-calculated in shape%, and the path's history is stored in pos%.'

Splurge on...

Alistair's *Splurge* works in mode 13 and the effects produced depend somewhat on the odd order of colours in a 256 colour mode. The patterns produced are similar to those you might get pointing a thermal imaging camera at a plate of sausages, or a family of snakes after they had enjoyed a hot beverage. This set us thinking and we wondered what might be possible using one of the new true 256 colour modes on a Risc PC.

Splurge256 is the result. No apologies are made for the way in which the palette-handling has been cobbled onto the original – the result is the main thing. Basically, apart from increasing the screen resolution, a wrap-around psychedelic palette is created which is then cycled (by one every third frame). The whole palette is changed in one go using *ColourTrans_WritePalette,* being careful to preserve the black background.



Á la mode

Author: Brian Cooke

Here's a short but exceeding useful BASIC procedure for Risc PC owners. *INFO regular(ish) Brian Cooke has finally written the utility we've been meaning to write for ages – a mode change call that doesn't upset the desktop mode!

If you weren't already aware, the BASIC command MODE has been extended to take a string to simplify mode selection. These strings are exactly the same format as the Mode sub-menu on the Display Manager's icon (the little screen next to the Acorn). In other words, you specify something like MODE X320 Y256 C256 to select a mode 13-like screen. Unfortunately, unlike the more traditional MODE 13-type instructions, BASIC makes a call to *WimpMode to change mode. This means, more than likely, that all your desktop windows will get scrunched together and you'll have to fight your way along the icon bar to find the display manager so you can change back to something sensible.

There is an alternative – using a mode selector block which we covered in the March '95 issue. The downside of this is it is relatively harder to use, setting up a parameter block and so on. This is where Brian's procedure comes in. Assuming it has been tacked on to the end of your program (or installed as a library – we've taken to keeping a copy with the system library and adding a LIBRARY Lib:Utils.PROCmode to the start of our graphics demos), you can simply replace any calls to MODE with a call to PROCmode. The routine parses standard format mode strings, builds the relevant mode selector block and uses it to change mode for you, without resorting to *WimpMode and thereby leaving your desktop intact.

*QUIT

All offerings welcome. Send them to:

***INFO, *Acorn User*, IDG Media, Media House, Adlington Park, Macclesfield SK10 4NP.**

Your name, address and program title on every disc please, and include a text file with your address and disc contents too please. An SAE will ensure your work's return. Also, any instructions – the more detailed the better – are appreciated, as are any diagrams, saved screens, examples and so on. Hope to hear from you soon!

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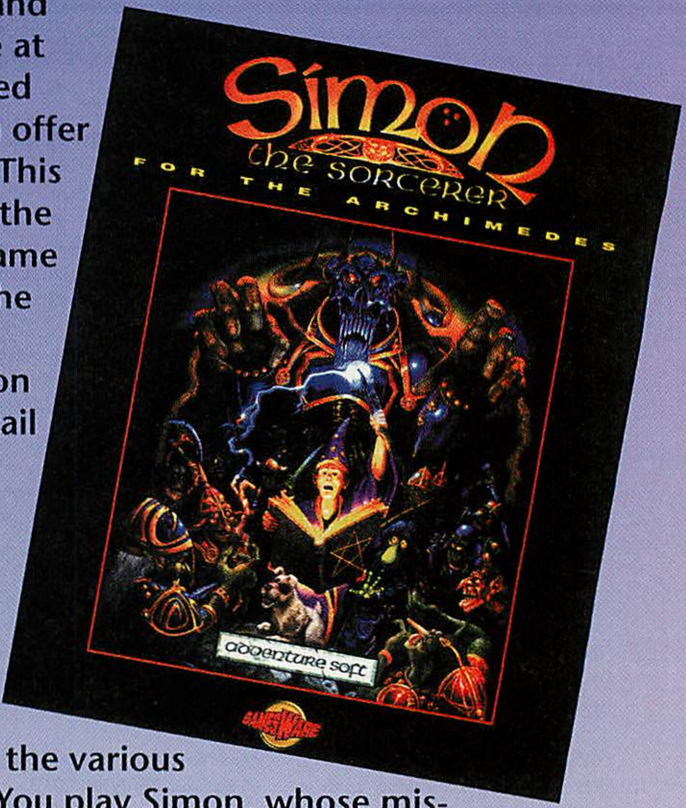
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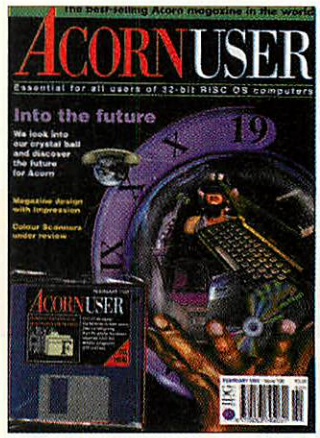
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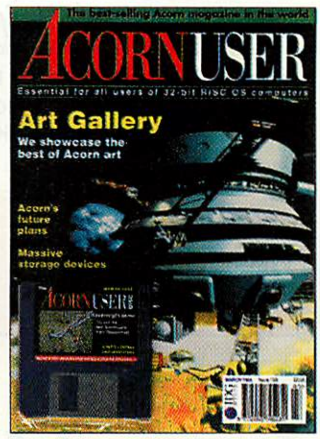
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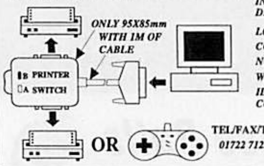
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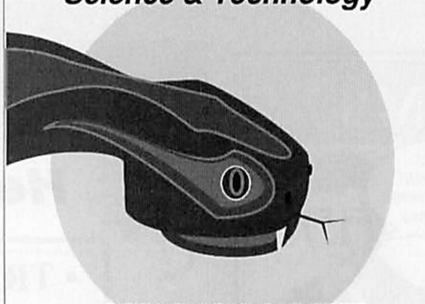
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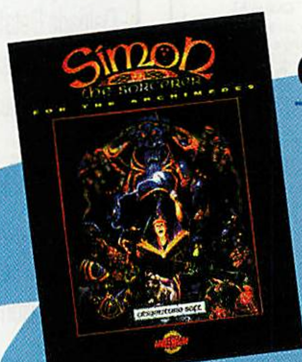


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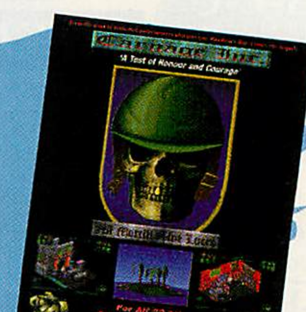


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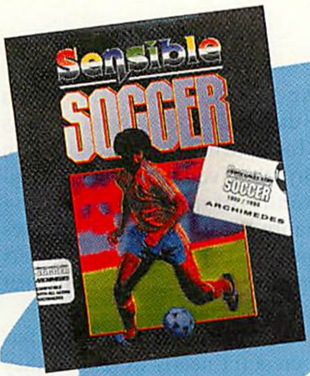
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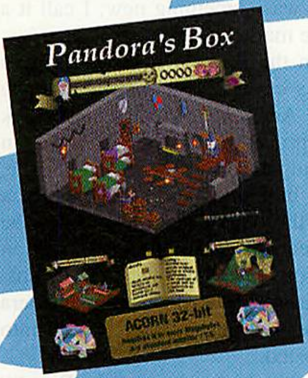
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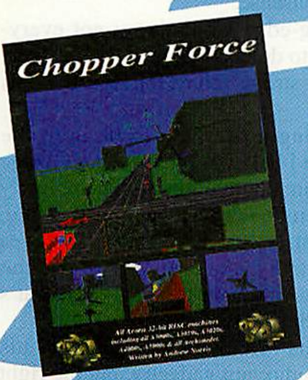
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REGAN

The Moxon Interview

PHILIP CHISHOLM

> It was something new; I call it a renaissance in the market

Philip Chisholm – part time brass band promoter, LP fan and tuba player – did a City and Guilds in Photography in the days when practical photography meant measuring and mixing endless quantities of powdered chemicals, and getting your hands covered in developer. That's not nicotine on his fingernails, it's potassium ferrocyanide.

He started out photographing the heavy industry round Teeside, taking black and white prints with his 5x4 MPP camera, but quickly realised that his first love was photographing people.

'I worked with a photographer who was going blind with cataracts,' he explains. 'I would focus the camera for her, and from her I learned how to "manhandle" people, and the creativity and lighting of portraiture. I fell in love with that, and with catching the awareness of moment, knowing exactly when to press the button.'

In 1973, 'Little Phil' Chisholm started his own business, Studio Tristan Photography, which thrives to this day. He uses what he calls his 'clockwork camera'– a £2000 Leica – for many of his photographs. This has seen good service from 20 degrees below freezing at the top of Ben Nevis to the Royal Albert Hall under the glare of the lights and has never given him a moment's trouble.

A battery-powered autofocus SLR simply wouldn't last, no matter how state of the art its features. Bullet points don't impress Phil, the ability to do the job does. And the job is changing: 'These days newspapers want pictures fast. There is a local firm who specialises in sports photography; they've recently spent hundreds of thousands of pounds installing equipment to enable them to digitise pictures and transmit them by ISDN lines to newspapers across the country. I want to be able to do that as a one-man profitable venture.'

This is where the Acorn comes in. Phil has used Acorn computers for nearly as long as they have existed. In the early 1980s he was titling the introduction to wedding videos using a BBC B. His brother produces a magazine called *Voice*, dedicated to the cause of vinyl against the all-pervasive CD, which is printed using *Impression Publisher*, an A440 and a Laser Direct. Now, with the coming of Acorn drivers for hardware like the Nikon Coolscan and the Primera dye sub printer, and with the Risc PC's 24-bit colour, Phil can begin to use them in his studio.

'I like the enthusiasm in the Acorn market. People are getting jaded in the Mac market, but when I came across Chris at Spacetech who's writing the driver for the printer he was excited, really excited. It was something new; I call it a renaissance in the market.

'I want to turn the back of my house into a communications centre. Everything will be based around the Acorn Risc PC. I'll come back from my shoot, process the negatives and scan them into the computer as a low resolution file. I'll pick out the best ones and scan them at a high resolution; the ones I need to send to the papers will be sent out straight away down an ISDN line, and those I need to send to other customers for resale will be printed on a Primera printer at high resolution and then folded into envelopes and posted.

'In addition to this, I intend to use the Risc PC in the studio. With a single-pass digital back for my Hasselblad hooked up to a Risc PC with a monitor and a Polaroid 6000 film printer, I can set up a one-stop portrait sitting. Currently, this can take as much as two months from the first time the customer enters the shop to when they pick up the finished proofs. Being able to do it all in one go is a marketing opportunity which is a dream to a photographer.

'The reason I'm looking at the Acorn machine rather than the Mac – which is the machine most photographers are looking at – is that the Acorn has software at a price the individual entrepreneur can afford. There's none of this "£500 for a pack of fonts" nonsense.'

This is cutting-edge technology; not everything Phil wants to do is possible at the moment, though he sees a strong future for Acorn in this area.

'It's an exciting profession to be in at the moment, because I believe that the digital image is as different from photography as photography was from the Rembrandt technique of painting, which was taught in London for two centuries before photography came and changed the stakes. I like breaking new ground – and that's nothing to do with being 22 stone!'

Phil's MPP, his 'clockwork' Leica and his Risc PC-based studio: not gadgetry, but the right tools hand-picked for the job.

David Matthewman AU

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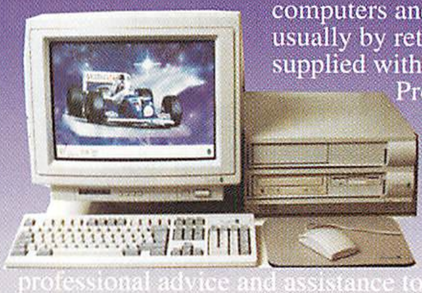
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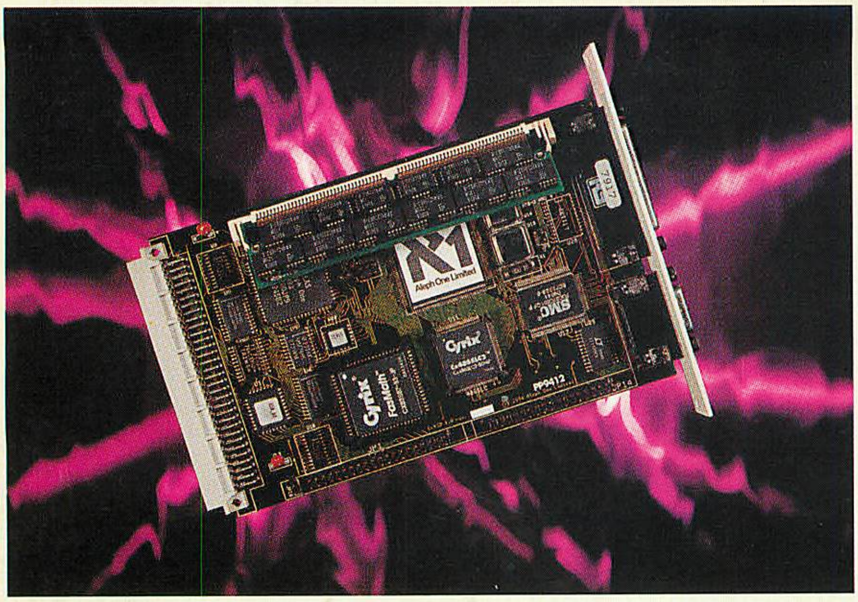
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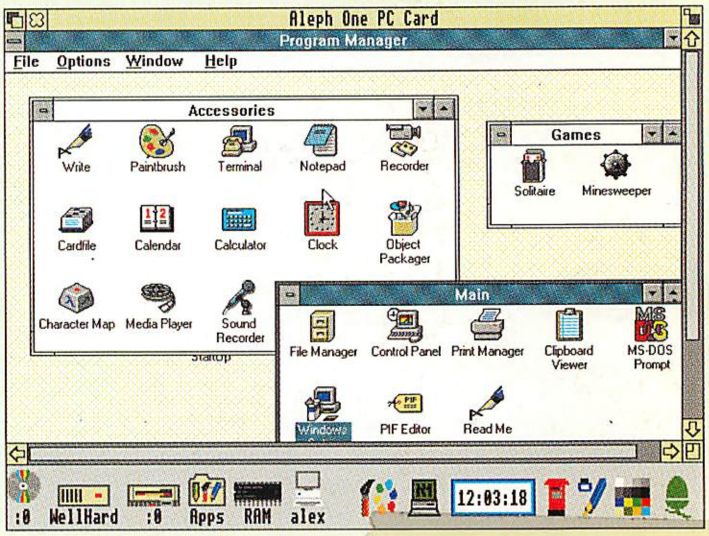
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